Vol. 30, No. 3 MARCH 1938

Journal of Home Economics

THE ROLE OF HOME ECONOMICS IN INTERCULTURAL EDUCATION

RACHEL DAVIS-DuBOIS

WE HAVE in our American life and in our public schools today peoples from all cultures in the world. Indeed, of our population of over one hundred and twenty-five millions, about thirty millions are only one generation removed from Europe, and many additional millions are drawn from the black and yellow races. Woofter (1), using as an indication of heterogeneity the presence in a country of at least one thousand people of a race other than white or of one thousand persons born outside the country, states that two thirds of the counties in the United States are heterogeneous. This heterogeneity of the peoples who make up our country presents a grave problem of social adjustment, but it also presents a great promise of cultural richness.

Leaders are beginning to realize that the old type of Americanization which encouraged our immigrants to slough off their cultural backgrounds as soon as possible and to take on "American" ways has never been a success; that, instead, it had produced innumerable maladjusted personalities. They are beginning to realize that all too often it is the children of recent foreign background, who live on the margin of two cultures, who tend to become "problem" children.

Of course, not all such children become "problem cases." Many have the stamina to withstand serious maladjustment. Statistics do show, however, that while immigrants do not contribute their proportion of criminals to the courts,

> American-born children of foreigners are much more likely to commit crimes than native-born persons of native parentage. And the reason for this, strange as it may sound to the 100 per cent Americans, is *not* because they are children of immigrants, but because they are Americans and are no longer controlled by the traditions and customs which kept their parents in the paths of rectitude. In one important sense it may be said that *Americanization* is one of the chief causes of crime in the United States. (2)

If we consider the problem further, we find that our lack of appreciation of cultural differences affects not only the personalities of our victims but also our own personalities. Bruno Lasker (3) cites a child psychologist as saying that children of the exclusive group "become egotistic and self-centered, domineering, and lacking in sympathetic tolerance." They become "snobbish, feel superior, form their own groups," and thus their lack of sympathetic understanding prevents the development of the kind of individuals needed to preserve our American democratic ideals.

We have said that the heterogeneity of the people who make up our country presents, in addition to a problem of social adjustment, a promise of cultural richness.

Maxwell Anderson (4) holds that "our culture in this country has been largely borrowed or sectional or local" and that "what we need now to draw us together and make us a nation is a flowering of the national arts, a flowering of the old forms in this new soil." We might add that a first step toward such a flowering will be made when we begin to value our cultural differences and find ways of sharing them with each other.

What role should the school play in the solving of this problem and the fulfillment of this promise? We believe that although the school cannot carry the responsibility alone but must work with the home and the community, it should take the lead. We believe that it should do this because it is the only institution which is or may become the meeting ground of all our varieties of culture. The public school should take the lead also because it can provide the facilities for open-minded study and comparison of the social values of each group.

It is recognized that creative teachers in many places have been working on projects in this area. Especially have home economics teachers shown their awareness of the problem by their interest in the native arts, crafts, and customs of foreign-born groups in their communities. Because of the complexity of the problem, however, because it touches so many sides of the pupils' lives, more integrated programs need to be thought out and experimented with, programs which would co-ordinate activities not only within the school across subject matter lines but between the school and the community.

There follows a report of an attempt to do just this thing. It was made by some fifty junior and senior high schools in the metropolitan areas of Philadelphia, New York, and San Francisco, and in Washington, D. C., with the guidance of the Service Bureau for Education in Human Relations, since taken over by the Progressive Education Association as the Commission on Intercultural Education. These schools took for their main objective during the semester the development of more appreciative attitudes among our culture groups. In many schools it was the home economics departments which took the lead by arranging planned social situations. The projects, however, were usually motivated through the use of a series of assembly programs which dramatized the cultural contributions of various groups to American life.

Though each school organized to suit its own needs, in some a month and in others a period of six weeks was devoted to each of several culture groups, the choices depending on the groups about which there was evident lack of knowledge or understanding. Some schools found it convenient to build their programs around the calendar. For instance, in October, because of Columbus Day, they presented in as dramatic a way as possible the cultural contributions of the Latin peoples to civilization; in November, because of our first Thanksgiving, the contributions of the British and of the American Indians; in December, because of their Christmas songs and legends, the contributions of the Germans; in February, because of Lincoln's birthday, the contributions of the Negro; in March, the Irish; in April, the Mexican and Latin-Americans; and so on.

Experience proved the value of the cumulative effect of a battery of experiences. This effect seemed lost if the programs were too far apart. Accordingly, two assemblies a month (in some schools two every six weeks) were set aside, the first for a program by outside guests, the second for a program in which students presented their own dramatizations of some phase of the contribution made by whatever culture group was being emphasized for that

particular month. The last program of the year, given on or near World Brotherhood Day on May 18, was usually in the form of a culminating pageant written or adapted by the students, which gathered together all the groups and focused attention on their interrelations in the United States and throughout the world.

As a first step in planning a program, the key teachers invited eight or ten adult representatives of the culture group to be studied to what was called a "planning tea." Experience shows that the public school does not use valuable community resources as much as it might. For our problem the secretaries of the Y. W. C. A. International Institutes were not only eager to give wise counseling but also knew the best of the culture group leaders. Together teachers and guests discussed outstanding misconceptions held by average Americans, specifically those held in that particular community, and discussed the best means of counteracting such misconceptions in an indirect but positive way. The guests gave the names of speakers and people of their group talented in music, the dance, drama, and so on, who might be asked to be part of an assembly program, usually referred to as the "guest program," which was to be used as the motivating force for the school activities. Often they suggested organizations which would lend the school books, posters, and pieces of folk art.

Following the planning tea, a meeting with the committee in charge of assembly programs (it was always urged that students be a part of this committee) was held at which available talent was discussed and choices made. In the majority of schools it was found best to start with a guest assembly program. The interest aroused through this experience permeated the other school activities and culminated in a student-planned follow-up program at the end of the four- or six-week period.

After each guest assembly program, social situations were planned and provided for during which the students might meet the attractive leaders of the various culture groups, and thus have an opportunity to put into practice or acquire new attitudes. In most of the schools it was found possible, after the assembly, to have a tea at which students met the young Chinese-American who had taken part in a play, the Jewish rabbi who had introduced the program on the cultural contributions of Jews to American life, the German Jew who had introduced the German program, or the Negro artist who had shown his paintings and talked on the history of portraiture. These situations were made as informal, colorful, and delightful as possible, for the purpose was to have each student leave with a feeling of having had a "thrilling time." In the larger schools, usually two delegates represented each class or club at the teas and reported their experiences to their groups. The tea was used also as an opportunity to invite parents and community leaders to join in entertaining the guests.

The real aim of these teas was to get members of the groups to do things together. Singing each other's folk songs, talking together, drinking tea together, are all experiences which tend to build sympathetic understanding. Under Miss Toriggino's persuasive personality, for example, it was only a few minutes before the whole group was singing Italian songs in Italian and saying "gracia" to each other. At the tea in honor of the Jewish guests, the Hebrew salutation, "scholom aleichim," was used, and the group sang Jewish folk songs together. The culture group receiving attention set the pattern for the tea. Perhaps one gathering featured a Swedish "Smörgåsbord," another a German "Kaffeeklatsch." These situations fitted into the home economics department plans for "dining abroad at home."

It was decided that if the student was to arrive at positive conclusions that could function in his life, something more than planned social situations was needed. For instance, after having had the emotional experience of seeing the Mexican dance and meeting the Mexican visitors at tea, the student was found to be eager and now perhaps for the first time able to take part in a discussion about our southern neighbors, the Mexicans. It was discovered that at this point there was special need for guidance to prevent the student from slipping back into his old attitude. It was in the small-group homeroom or classroom discussions, for which the assembly and the tea had been merely motivations, that both students and teachers learned to face their prejudices and their fears. It was there, after the acquisition of a sufficient number of facts, that there were developed more stable objective appreciations, appreciations which could really be counted on to withstand the counter-pull of prejudiced social worlds outside the school. It might be said at this point that although we recognized the tremendous impact of the economic factor as a cause of prejudice, we felt that man is also conditioned by his psychological relationships and that it is in this field that the school can do most at this time.

The discovery was soon made that it would be necessary to find facts for ourselves since they are not in the usual texts and reference books. It was found, for example, that the first successful operation on the human heart was performed by a Negro physician, Dr. Williams of Chicago; that our community chest idea is Jewish in pattern; that Slavic countries have furnished many of our musicians. Indeed, research into America's cultural resources, it was found, proved definitely that every group has contributed something indispensable to American life.

Home economics classes used such suggestive lesson sheets as "The Arts and Crafts of the Pennsylvania Germans," "Italian Cookery and Home Customs," "Vignettes of Jewish Home Life," "English Gardens in America," "Carver of Tuskegee Institute," "Armenian Cooking in the United States," "Japanese Flower Arrangement," "Lue Gim Gong (a Chinese-American Horticulturist)."[1]

Because it was felt that a cycle was not complete until the students themselves had acted in or witnessed a program or dramatic sketch of their own making which showed some phase of the particular group being studied, the students gave their own assembly program after about a month's attention to a culture group. It was found that these vicarious experiences tended to modify emotional attitudes. Especially was this true for those who took part in the dramatic presentations. Those students who took the parts of Italian or Slavic immigrants, telling why they came to America, lived for a brief while the lives of those immigrants. The Gentile students who acted with their Jewish fellow students in a Jewish play long remembered their experiences during the time when they were a part of the ways of thinking, feeling, and acting of that culture group. Indeed, the Commission on Intercultural Education receives from time to time requests from those same students, now in college, for research material to help them in their term papers.

That the programs and related activities integrated around the problem of intercultural relations proved satisfying experiences for the students who took part in them, may be judged somewhat from student answers to the question: "Have you

[1] These and numerous other lesson sheets on fourteen different culture groups are available at the Commission on Intercultural Education, Progressive Education Association, 310 West 90th Street, New York City.

changed your attitude toward any of the groups presented this term?" Among the answers were the following:

I go to Hebrew school and did not want to learn Hebrew but when I heard that girl singing Hebrew, I was more interested in learning the language.

I thought the Germans were all cruel and barbarous until I learned about them. I had thought the Mexicans were all villains, as they are in the movies.

I always looked upon Poland as a poor country with nothing worth while in it, but after hearing the culture talk and seeing the pictures, Poland really has some things to be proud of.

Of course, these statements are subjective evaluations, but in the field of human relations we must as yet lean heavily on such judgments. However, objective attitude tests were given in some schools, and it can be stated that after each testing the change was found to be "statistically significant."

Even though the teachers saw the decidedly positive effect of these programs upon the students, they began to realize that they had only made a start in the right direction; that the whole problem of integration between subject matter areas within the school and co-operation between the school and community is one of administration and needs careful planning. They found, however, that by keeping their eyes on a common social goal—that of better intercultural relations—the administrative problem seemed to become less difficult. The fact that the experiment was tried in several different places enabled the schools to share their experiences; and although that which was successful in one place did not always fit in another, the sharing of ideas was found to be valuable.

It is hoped that home economics teachers in other parts of the country who are working on various phases of this problem of intercultural education will make known their activities. By so doing, further steps in more of our heterogeneous counties will be taken toward the solving of America's intercultural problem and the fulfilling of the promise of cultural richness which the heterogeneity of our people presents.

REFERENCES

1. WOOFTER, T. J. The Status of Racial and Ethnic Groups. *Recent Social Trends*, Vol. I. Report of the President's Committee on Social Trends. New York: McGraw-Hill Book Co., 1933, p. 553 ff.
2. THRASHER, F. M. Are Our Criminals Foreigners? *Our Racial and National Minorities*, edited by FRANCIS J. BROWN and JOSEPH S. ROUCEK. New York: Prentice-Hall, 1937, p. 698.
3. LASKER, BRUNO. *Race Attitudes in Children*. New York: Henry Holt & Co., 1929, p. 253.
4. ANDERSON, MAXWELL. The Arts as Motive Power. *New York Times*, Oct. 17, 1937.

HYGIENIC LIGHTING IN THE HOME

MILES A. TINKER

THE importance of lighting in the home is obvious. The amount of visual work done in the ordinary residence emphasizes the need of comfortable, healthful, and efficient working conditions for the eyes. It is now well established that faulty illumination leads to eyestrain, which, in turn, frequently results in reflex organic disturbances and sometimes leads to defective vision.

Recent events are producing a lighting consciousness. The better light—better sight publicity, articles in popular magazines by writers who have interviewed "lighting experts" (1, 2), reports written by educators advocating specific measures to improve lighting in home and school (3), and both critical and experimental reports in scientific journals indicate the extensiveness of the emphasis on illumination in relation to vision.

The lighting in the ordinary home is undoubtedly very poor from the hygienic point of view. Traditional practice in home planning, together with lack of sound information concerning the fundamentals of adequate lighting, are to blame for this condition. The conscientious application of the relatively few basic principles of hygienic illumination will improve home lighting markedly without excessive increase in cost or sacrifice of beauty.

Research by engineers, physiologists, and psychologists furnishes an adequate basis for sound lighting practice (4) in the home. In this discussion, which will be based upon experimental findings, there will be given a generalized statement of (1) intensity or brightness of light, (2) quality or color of light, and (3) distribution of light as determinants of hygienic illumination.

Intensity. Too low an intensity or too bright a light usually produces an unhealthful environment for the working eye. Frequently the eye is trying to function under conditions of lighting which are not far removed from the candle and kerosene-lamp days of our ancestors. On the other hand, an attempt to remedy lack of light by merely using very bright illumination without regard to the glare which may occur (to be discussed under distribution) does not help the situation. There must be a proper balance of intensity with other factors. From the standpoint of economy and hygiene of vision, there is nothing to be gained from increasing the brightness of light beyond the point that yields comfortable and healthful vision during visual work such as reading, sewing, and the like.

How to tell what degrees of intensity of light should be considered best for different types of work is not simple. It calls, in the first place, for the measuring of light intensity. This is done with a device known as a light meter, a complicated instrument which must be frequently calibrated; one was found to be registering 40 per cent under the true values. Light values are commonly expressed in terms of foot-candles, a foot-candle being the intensity of the light from a standard candle at the distance of one foot. Another measurement needed to determine the optimum light for a given type of work is that of the efficiency of sight, or, as it is usually called, visual acuity. This is what the oculist measures when he has his patient read letters or symbols of different

sizes at a fixed distance and with a given amount of illumination. Similarly, the degree of light intensity needed for efficient reading of standard material may be determined by varying the brightness of illumination. This method of measurement is, of course, not applicable to all types of work, and others must be devised to determine the best light intensities.

Luckiesh and Moss (5, 6), who have been intimately associated with the science of seeing in their extensive research program, attempted to determine the desirable intensity for reading by studying the nervous tension in the worker's fingers while reading under 1, 10, and 100 foot-candles of light. On the basis of their results, they suggested a series of standards which, because of the investigators' prestige, has rightfully received wide attention. According to their conclusions, anything less than 5 foot-candles is the danger zone. Since they found that nervous tension decreased when the light intensity was increased from 1 to 10 to 100 foot-candles, they suggest 25 to 50 foot-candles for ordinary reading, 50 to 100 foot-candles for prolonged work at such tasks as difficult reading and average sewing, and 100 foot-candles or more for severe and prolonged tasks such as fine needlework or close inspection work. In fact, they state that several hundred foot-candles illumination would be best for reading large print on white paper. Reanalysis of their data has led the present writer to question whether the data were not misinterpreted (7). To him they indicate rapid changes in finger tension up to about 5 foot-candles of intensity, slower changes from 5 to 10 or 12 foot-candles, and only slight alterations from there on. In fact, the resulting curve is almost exactly like that expressing the relation between visual acuity and intensity of illumination. It would seem, therefore, that all of the changes in finger tension that are of practical significance occur at relatively low intensities. Neither the Luckiesh and Moss data nor those for visual acuity justify the claim that the very high intensities suggested are either desirable or necessary for reading or for many other forms of visual work. The recommendations given in popular articles and talks which are based on this report are, therefore, invalid.

Many experiments on the relation of visual acuity to intensity of light give highly consistent results (8). From a fraction of 1 foot-candle to about 5 foot-candles there is a rapid rise in visual acuity. As the brightness increases from 5 to 10 or 12 foot-candles, the improvement in acuity progresses more and more slowly. Between 12 and 20 foot-candles the changes in acuity are hardly discernible and beyond 20 foot-candles they have no practical significance.

Other experiments (8) have a more direct bearing upon the relation between illumination and such tasks as reading, study, and the like. In measuring the efficiency of visual work in terms of visual fatigue, it has been demonstrated that visual fatigue at the end of three hours of continuous reading is marked when the intensity of light was one foot-candle or less; from approximately 3 foot-candles to 53 foot-candles, however, no change in visual fatigue has been observed. In other words, with 3 foot-candles or more, three hours of continuous reading produce only a slight amount of fatigue and one that is approximately the same for 3 foot-candles as for more intense levels. That is, 25 or 50 foot-candles are no better than lower intensities. A similar trend was found in another experiment for efficiency of work measured in terms of speed of reading. When light intensities were varied by steps from 9.6 to 118 foot-candles, no change in working efficiency in a number-work test was discovered. In an extensive investigation of lighting in United States post

offices, it was found that the efficiency of letter-sorting reached its maximum when the brightness of illumination was 8 to 10 foot-candles. The increase in efficiency of sorting was large when the illumination was raised from 2 to 5 foot-candles but only slight when it was raised from 5 to 8 or 10 foot-candles.

What brightness of light will the reader choose for comfortable reading? The pertinent data on this subject (8) show that approximately 5 foot-candles were chosen on the average for reading 11- or 12-point type (slightly larger than that used on this page), 11 to 16 foot-candles for medium-sized type, and only 17 foot-candles for a type of very poor legibility when 30 foot-candles were available. That is, the subject was permitted to read for a short period under each of various intensities of light ranging from a few to 30 foot-candles, and then he chose the brightness which he preferred for comfortable reading. In another experiment the following choices were made: When 8 foot-candles were available, the readers chose approximately 4; with 30 available, they chose 11; with 45, 16; with 65, 23; and with 100, 36. It would appear that about one third to one half of the available intensity was chosen as most comfortable. Apparently the adaptation of the eye at the time determines to some extent what brightness is preferred for comfortable seeing. If adapted to bright light, a fairly high intensity will be chosen, and vice versa. It is well known that the eye readily adapts itself to easy and efficient seeing at various intensities of illumination above a certain minimum (about 3 foot-candles). In the ordinary home the range of intensities that are available is probably about 8 to 30 foot-candles. Four to 11 foot-candles, therefore, may be taken as representative values for brightness of light preferred for comfortable reading in this situation.

Since many factors such as distribution of light, condition of the eye, and the like, are to be considered in determining hygienic illumination, it is hazardous to set up standards of light intensity for reading and similar tasks. It may be justifiable, however, to suggest tentative specifications that should provide a margin of safety for comfortable and efficient seeing. One should probably never read with less than 5 foot-candles of light unless there is a bad arrangement of direct lighting such as a bare light bulb which is within the field of vision while the reading is being done. In such a situation a slight reduction in intensity will be less fatiguing to the eyes. Where the distribution of light is only fair, as in some homes, use 5 to 10 foot-candles.

Watt size of bulb required to yield given intensities of light at given distances between bulb and work

WATT SIZE OF MAZDA FROSTED BULB	DISTANCE NEEDED BETWEEN LAMP BULB AND WORK TO GET GIVEN INTENSITIES OF LIGHT		
	10 ft.-c.	15 ft.-c.	25 ft.-c.
	inches	*inches*	*inches*
25	16	12	9
40	23	19	14
50	27	21	17
60	31	26	20
100	44	37	29

With good distribution of illumination, use 10 to 15 foot-candles. If no glare due to poor distribution of the light or to other factors is present, higher intensities may be employed with safety but without gain in efficiency and comfort. An international commission on illumination recommended 8 foot-candles as a minimum in classrooms. The accompanying table will give to the home owner some notion of the relative brightness from different sizes of light bulbs. The intensities in it were measured with a General Electric Light Meter for frosted Mazda bulbs in a bridge lamp with a 12-inch parchment shade. The table should be read as follows: A 40-watt bulb will give 10 foot-candles of light at 23

inches from the bulb and 25 foot-candles at 14 inches from the bulb. The figures should be used only as approximations, since there is some variation in lamps and the brightness decreases somewhat with use.

Relatively high intensities of light are required for hygienic vision under special conditions (8): for example, the defective eye, either in children or in older people, needs a somewhat brighter light than the normal eye; when print has poor legibility due to very small size or to some other factor, it should be read under somewhat brighter illumination; sewing or other visual work which requires fine visual discrimination should be done in a relatively bright light.

Quality of light refers to the color or wave length of the illumination (4). Visual acuity varies somewhat from one colored light to another. The order of colors that yield from greatest to least acuity of vision follows: yellow, yellow-green, green, red, blue-green, and blue. White light (sunlight) composed of all colors of the spectrum is superior to yellow. With artificial illumination, yellow can be used to advantage for discrimination of fine details. In a similar manner, mercury arc light yields greater visual acuity than tungsten light (ordinary light bulb). These findings are not of high importance in the practical situation like the home. In reading and similar tasks, light from an ordinary bulb is just as effective as a colored light on the mercury arc. Similarly the "daylight" bulbs are no better than ordinary bulbs in the practical home situation.

Distribution of light is the most fundamental aspect of hygienic illumination (4). It is sometimes called quality of lighting. Failure to maintain a satisfactory dispersion of light in the visual field frequently results in lessened visual efficiency, fatigue, and eyestrain. This occurs in the presence of glare arising from poor arrangement and type of lighting and from surface reflection, and in the presence of an unfortunate variation of high lights and shadows in the visual field.

We are all familiar with the disagreeable effects of a bright light off at the side, shining into the eyes while we are reading or doing other fine visual work. Lateral illumination of this type is a disturbing factor of high importance. As the side light becomes brighter and as it is moved closer to the reading page or immediate working surface, its detrimental effect upon vision becomes greater. Thus continuous reading, sewing, or other visual work with light sources present in the visual field is bad. The more light sources there are, the greater the fatiguing effect. These fatiguing effects are due to muscular strain rather than retinal fatigue. Stimulation of the outer portions of the retina arouses a reflex tendency to fixate the side lights rather than the work at hand. This means that there must be constant action of the antagonistic muscles to inhibit the tendency to fixate the side lights. The result, of course, is excessive strain, which is manifested in fatigue and loss of efficiency.

When there are highly polished or glazed objects in the field of view or if print is on glazed paper, the reflected light produces an uncomfortable glare which interferes with visual efficiency. The more uniformly the light is diffused throughout the visual field, the less surface glare there is.

Contrast within the portion of the visual field where critical vision is required is another distribution factor of high importance. If the eyes, in reading, sewing, or other fine work, are required to shift back and forth from bright to dark areas, there results a constant readaptation to the different degrees of brightness. Soon muscular strain occurs, and this is manifested by fatigue and loss of efficiency. If the demarkation between the light and dark areas is sharp, the fatigue effects are increased.

Marked contrast of brightness within the visual field, therefore, should be avoided as far as possible.

How can these principles be applied in the home? The home owner need not worry about color of light. Ordinary electric light bulbs are entirely satisfactory. The problems of intensity and of distribution should be considered together. Although the ideal cannot be achieved in all homes, much can be done to improve hygienic lighting. It is best to avoid wall brackets. Whether one is reading, sewing, playing bridge, or merely conversing, these fixtures provide annoying and fatiguing light sources in the peripheral vision. For the same reason, a large number of table and floor lamps in the same room is undesirable. Ceiling fixtures should be hung close to or built into the ceiling. Since the height of the ordinary room is 7½ to 8 feet, the lowering of the fixture any appreciable distance from the ceiling would bring the light source into the field of vision during much of the home owner's visual activity. No light source should be in the visual field during visual work if the best working conditions are to be maintained. Raising the light source will, of course, reduce the brightness at the working surface. This can be remedied by supplementing the general illumination from the ceiling fixture with local lighting, as by a table or floor lamp located at the working position.

Avoid strictly local lighting, such as a desk lamp with an opaque shade. This produces a bright spot of light surrounded by shadows, a condition which is decidedly unhygienic. When local lighting is used, there should also be general illumination of the room. The ratio between the brightness of the local lighting and the general illumination of the room should never be greater than 10 to 1 if disturbing brightness contrast is to be avoided.

When table lamps are used, the bottom of the lamp shade should not be less than approximately 20 inches above the table top. This will keep the light source out of the visual field when working at the table. Likewise, floor lamps should have a fairly tall standard. Both table and floor lamps should be so arranged that the reader or sewer does not face the lamp. The light should be well to the side of the immediate working surface or behind the worker. Then it will not be necessary to look at the bright light even when the eyes are raised from the work.

The proper intensity with satisfactory distribution is most economically obtained through a combination of moderately bright general illumination plus local lighting at the place of work. While this may be obtained by ceiling fixtures, supplemented by table or floor lamps, there has been recently developed a single lighting fixture that yields both general and local illumination. It is known as the I.E.S. (Illumination Engineering Society) certified lamp. Both table and floor models are available. They have an open top shade so that light is sent directly to the ceiling where it is reflected about the room in a fairly uniform manner. Below the light bulbs is a translucent porcelain bowl through which the light passes in a diffused manner to the working surface. These I.E.S. lamps, therefore, furnish a very satisfactory combination of indirect and semidirect lighting. Bulbs of lower wattage than those specified for the lamp may sometimes be used, since 10 to 15 footcandles will be found satisfactory. These lamps, which are attractive as well as efficient, mark a distinct step forward in hygienic home lighting.

We may conclude by emphasizing that the home owner can, by applying the principles here discussed, maintain illumination which is comfortable and which yields hygienic working conditions for the eyes.

REFERENCES

1. GILLIS, M. D. What Kin Are Sight and Light? *McCalls*, Vol. 62 (Nov. 1934), pp. 46–47.
2. LUCKIESH, M. The Eyes Should Have It. *Good Housekeeping*, Vol. 99 (Nov. 1934), pp. 88–89, 201–202.
3. ROWELL, H. G. Turning the Light on Home Lighting. *National Parent-Teacher Magazine*, Vol. 30 (Oct. 1935), pp. 10–11, 34–35; Turning the Light on School Lighting. *National Parent-Teacher Magazine*, Vol. 30 (Dec. 1935), pp. 12–13, 28–29.
4. TINKER, M. A. Illumination and the Hygiene of Reading. *Educational Psychology*, Vol. 25, (Dec. 1934), pp. 669–680.
5. LUCKIESH, M., and MOSS, F. K. *The New Science of Seeing*. Cleveland, Ohio: Lighting Research Laboratory, General Electric Co., 1934.
6. LUCKIESH, M., and MOSS, F. K. *The Science of Seeing*. New York: D. Van Nostrand Co., 1937.
7. TINKER, M. A. Cautions Concerning Illumination Intensities for Reading. *American Journal of Optometry*, Vol. 12 (Feb. 1935), pp. 43–51.
8. TINKER, M. A. Illumination Intensities for Reading. *American Journal of Ophthalmology*, Vol. 18 (Nov. 1935), pp. 1036–1039.

THE TEACHING OF NUTRITION

JENNIE I. ROWNTREE

WERE the goal of nutrition merely to make students realize the importance of food for health, the problem would be simple. But if the goal is to develop skeptical scientific judgment based on analytical ability, to foster open-mindedness toward new developments, to equip students with ready information which they know to be well supported by experimental work, to develop a sense of social obligation in nutrition, and finally to leave students with a feeling of mastery over their health, teaching becomes as perplexing and intriguing as research.

The development of sound scientific judgment is the foremost problem. Students can readily acquire and apply a collection of impressive nutritional commandments by which they themselves may become intellectually hidebound. Acceptance of statements without analysis of the supporting scientific data will either pave the way for the faddist or leave one impervious to new ideas.

How can the too-ready acceptance of the conclusions of the test or of the teacher be prevented? Possibly President Hutchins is right in believing that no single cause has done as much to lessen thinking by American students as the misuse of textbooks. But the teacher-lecturer runs a close second. Statements are often passed on as facts when the teacher herself questions their validity. Nothing emphasizes poor teaching more than students who quote a didactic text or teacher without being able to fortify the statements with valid proofs, and nothing has a more woeful effect on intellectual growth and emotional stability. Slight discrepancies from the cherished dietary standards disturb those who have memorized requirements and sources but who lack an understanding of the complete problem.

How can analytical ability and scientific judgment be developed? The teacher must first be an educator, not a health propagandist. It seems wiser not to begin with a hygienic aspect, but always to make a scientific approach. Convincing reasons and experimental proofs are always more important than precepts. If the student can accumulate her own evidence in the laboratory and from authoritative literature and her own observation, her conclusions will have a more fundamental effect than will a rule learned by rote. Furthermore, she will become more open-minded, more ready to reconstruct her thinking.

Students must learn somehow to accept most conclusions from experimental work as tentative; to place them on trial under different conditions; and, if the results are found in error or not applicable to human nutrition, to discard them willingly without loss of confidence in the value of experimental work. One of the most difficult things to teach is that well-controlled research is never wrong, but that explanations regarding it are often wrong and that experimental conditions are often very different from those under which the foods are ordinarily used.

Students should also learn to see values in hypotheses and theories, see that strong convictions and disagreements are catalysts that promote both further experiments and keener observation. The original hypoth-

esis may be presented from very limited data, but it is highly useful if it serves to arouse disagreement and confirmation and if other investigators, working under different conditions, are stimulated to prove or disprove the ideas. Students must see that the hypothesis, supported by many different data, may become a well-supported theory from which a proved fact may finally emerge.

If the nutrition course begins with the chemistry of carbohydrates, reading assignments of original articles on availability and digestibility are valuable in showing controversial points. If the students see in the beginning that there is difference of opinion regarding the value of different sugars for infant feeding, if they realize the dearth of knowledge regarding the utilization of the various types of cellulose, they see nutrition as a scientific problem, not as a set of rules.

For the development of scientific attitude and judgment, term papers seem indispensable. In no better way can students learn to face disagreements and weigh data. They learn to look for hypotheses, to find theories in biochemical journals and confirmations in medical ones, and to read texts for conclusions, and come to realize that further work may change opinions.

If the better term papers with the teacher's comments are made available for class reading, the group will know recent trends of thought and see which ideas arouse protest and which are accepted as factual. Since the students have the same scientific background, their papers are adapted to each other's intelligence levels and make good assignments. The fact that the best papers are to be assigned stimulates greater effort both in the reading and the writing.

Critical judgment is promoted by outside reading, but laboratory work should provide the information and develop the analytical ability with which to digest printed data. Laboratory work should be periodically subjected to critical analysis and appraisal. Often laboratory work has been a case of adding 2 drops of sugar solution to 5 cc. of Benedict's and writing a plus sign in a notebook, with each test a complete entity in the student's mind. Quizzes often reveal that acid and enzyme hydrolysis are unrelated and that much time on the "hoof" has been wasted.

A recent attempt to improve the laboratory work in our general nutrition course may be of interest. For this course, the home economics majors get eight quarter-hour credits, and they take it in their junior year after having had inorganic and organic but not physiological chemistry. The first of the laboratory work, therefore, covers the simpler, qualitative tests on carbohydrates, fats, and proteins and the hydrolysis of each, while at the same time food sources, digestion, and metabolism are studied. Following this, the laboratory work concerns itself with nutritional values.

One change in the course is the substitution of a one-hour laboratory demonstration by the instructor for a two-hour laboratory period. The first demonstration "Time Saving in the Laboratory" showed the use of a time schedule, the intelligence needed in getting a meal, and the necessity of studying directions before coming to the laboratory in order to make better use of time. For example, in the demonstration, hydrolytic experiments on starch and sugar and cellulose were started at the same time, even though directions appeared on different pages of the manual.

In this period, experiments which students have not done and some which they have done are demonstrated, the latter always with variations in order to see if underlying principles are understood. This demonstration serves as a quiz but is more informal and more valuable. Applications to digestion, absorption, and metabolism are stressed in order that students get the

habit of saying "What of it?" when they carry on an experiment, and also in order that knowledge of applications will vitalize and fix subject matter. Much material may be covered in the hour, but the student is given the next laboratory period to repeat any experiment which is not perfectly clear. She is not required to repeat any of the tests if repetition seems futile, but instead unknowns are provided upon which she can test her ability—some foods, some proprietary products, and some unknown solution.

The aim is to make the student see laboratory work as her responsibility to herself, not to the teacher, that neither the amount done nor the products are of primary importance. Her criterion should be how much she has learned in methods of attacking problems, of interpreting reading material, and in powers of observation. The instructor is there to aid, suggest, and explain, not to teach or supervise. Undergraduate students in home economics are apt to regard the goal of laboratory work either in terms of techniques or of products, but not for classifying and fixing subject matter.

This demonstration period also gives an opportunity for certain students to demonstrate special techniques, topics, or experiments without interrupting the laboratory work of others or taking the lecture period for the purpose. For example, the Babcock test, a Kjeldahl, ashing, fat extraction, or animal experimentation may be demonstrated.

A further advantage in this demonstration is that it enables the teacher of a large class to meet all the students in smaller groups. Instead of ordinary laboratory notebooks, students write a brief summary of the laboratory work on each subject, including the demonstration, and indicate the object and application of the experiments to digestion or metabolism.

An ever-present problem in the laboratory work is the best method of teaching dietary calculations. Weighing and measuring food values with the aid of a laboratory manual often become mere routine in which notebooks but not heads are filled with information. With the objective of fixing usable information in minds, the manual has been replaced with a few mimeographed sheets in which foods are grouped together in classes—cereals, meats, fruits, vegetables. The sheets give the average composition of each, and this must be memorized. Learning average composition prevents large errors in more exact calculations later. Not to overtax the memories, the approximate carbohydrate content of all classes is learned first, then fat, then protein, immediately following the study of the chemistry of each. Vegetables and fruits are listed according to percentage of carbohydrate; bread is learned as $\frac{1}{2}$ carbohydrate by weight, cereals as $\frac{3}{4}$, and jellies and dried fruits as $\frac{2}{3}$. The protein content of fruits is approximated as 1 gram per serving, that of vegetables as 2, of breads 3, of eggs 6, of milk 8, and of meats 15 to 25.

This may seem rather approximate, but the wide variation in food due to climatic conditions, state of maturity, and method of preparation makes meticulous accuracy impossible. Too often figures have been carried to several decimal places when the material has been weighed on an inaccurate Chatillon scale, or when considerable batter has been left in the mixing bowl.

Is there ever any value in figuring the carbohydrate in 100 grams of apples as 10.65 when the carbohydrate content of different varieties ranges from 6 to 15 per cent? Diabetics adding decimals need sympathy, a better teacher, or a broader insight into dietetics. Students should realize that practically all foods show wide differences in composition and that averages were taken as the final figure. If they knew that carbohydrate was determined by difference and included the di-

gestible as well as the indigestible portion, if they read recent work on available glucose in food, they could more ably teach the diabetic. It seems justifiable, therefore, to teach the approximate carbohydrate content; and the division of fruits and vegetables into six groups according to that factor seems rather futile.

Not only the carbohydrate but also the fat and protein are variable factors. Individual specimens of given kinds of meat and cheese vary, and fat and water changes due to variations in cooking make accurate figures unreliable.

Exactness in the calculation of calories is also futile. Calculating the calories in a pound of bread as 1,165 when neither the amount of fat nor the milk used in the recipe nor even the final water is known, is primarily practice in arithmetic.

Definiteness is no more justifiable in the calculations of minerals. If, as Davidson and LeClerc have shown, the calcium in different varieties of spinach varies by as much as 200 per cent, if the amounts lost by different methods of cooking vary as much as they do, why worry about the second decimal? The same reasoning holds for iron, where, in addition, the utilization appears to depend on the chemical combination. Nor can we be any too definite regarding the requirement of individuals for each of the nutrients. Round numbers should suffice.

Extreme definiteness, like all rigid maxims and rule-of-thumb routines, leads to worry, confusion, and error. Even though texts explain that requirements have been calculated as half again as much as the amount necessary for equilibrium, students worry if their boarding-house fare fails to provide 15 milligrams of iron or if children are not drinking the full quart of milk; and they view an infant as a peculiar specimen if he is thriving on less than 500 to 700 international units of added vitamin D.

The most difficult thing to teach in nutrition is the interpretation of averages, for students regard them as ideal. In a basal metabolism test, a deviation from the predicted 7 or 8 per cent may be very disturbing to the subject, even though she has read reports of metabolism tests on college women. If the worry ended in the classroom, no harm would be done; but, unfortunately, students and their children become the victims. Thus, the teaching of nutrition resolves itself into the development of common sense. This may be a goal beyond hope of achievement, but we should strive to prevent "horse sense from going asinine."

If minds are to be developed, emphasis must be laid upon roots, sources, and springs of nutritional knowledge. In some way the variety of the contributions and the historical development must be sensed. Few undergraduates realize that nutrition took its material from physiology, from the three branches of biochemistry, from food chemistry and psychology; that the keen observations of physicians and experimental work done in hospitals has been fundamental in its development; that one person's reported success with a food or medication is not conclusive evidence.

Biochemistry to the student may merely mean a necessary evil, a requirement for graduation. She should see the three phases which have been and are contributing: the studies of energy exchange; the analytical methods which make possible a knowledge of blood, urine, and body fluids and tissues; and the animal experimentation which shows the results of inadequacies and long-time effects. She should realize the co-operation carried on today between sciences—the biochemist showing abnormal variations and inadequacies, the physiologist studying the specific function of each new essential vitamin or hormone, the organic chemist analyzing and finally synthesizing the elusive factors, the physi-

cian studying the therapeutic value, and the food analyst discovering sources in foods. She must see that neither substances like vitamins, nor facts about them, are suddenly discovered but laboriously and painstakingly evolved by the combined efforts of many workers differently trained. Too often rat colonies seem the all-important springs of knowledge. In the training of graduate students this synthetic feeling is fundamental, both for their own nutritional philosophy and for progress in the field. Nutrition must not be regarded as an entity. The spread of the roots as well as the branches of application must be sensed.

A difficulty encountered in training graduate students is an attitude of hero worship toward a former teacher or some authority whom she has unconsciously exalted in her undergraduate study. When loyalty to an individual means wholehearted allegiance to every scientific opinion he propounds, new ideas become painful. During the first term of graduate work, many facts must be uprooted at the risk of loss of confidence; but without this harrowing and upheaval, no seeds will take root.

The emphasis in nutrition is of extreme importance. Faddists are easily made if cast-iron doctrines are disseminated. Witness the attention given to anorexia in the last fifteen years, the seeds of which came from nutrition laboratories. Over-accents make the sensitive and oversolicitous into neurasthenics, make the poor panic-stricken, and disgust the thoroughly intelligent with all of nutrition.

Over-accents have no place in science. Students must develop an abhorrence of untruths, whether they spring from well-meaning enthusiasts, from quacks, or from unethical advertisers. It is essential also that psychology be well mixed with the science of nutrition. Many periods must be spent discussing the comparative costs of the various essentials. Much consideration may have to be given to food preparation, emphasizing not only costs but the time element. Too much emphasis may have been placed recently on low cost and too little on meals that are prepared quickly in the time that housekeepers will and can give.

More integration may be necessary between marketing and nutrition courses. Grades, brands, nutritional value, and methods of use should be considered together. Often one wonders if the subject of food is presented in too many compact compartments. If the course in nutrition is the final one, it should bring all the loose ends together and consider food values per pound, cost and attractive qualities for the purpose intended, ease of preparation, and finally the comparative cost of the home-prepared and purchased product. If society is to benefit, our graduates must have a clear conception of the obligation to put their nutritional knowledge to work in improving health, reducing medical costs, correcting food budgets, stabilizing health attitudes, educating people to conserve health and money, and making society see that to provide adequate food for the whole people is not charity but economy.

PROBLEMS IN THE SELECTION OF TEXTILES AND RELATED SUBSTANCES IN CASES OF ALLERGIC REACTIONS[1]

LOUISE STEDMAN AND MERLE FORD

THE problems of allergy are receiving increasing attention both from the medical profession and laymen. The fact that various phenomena were being brought to the attention of clothing and textile specialists both by members of the medical profession and by allergic individuals and that advice about specific textile problems in relation to allergy was being sought occasionally, made the authors feel that a thorough search of medical literature for references to textiles and related substances as sources of allergic disturbances would be timely. It also seemed desirable to compile such information and interpret it in a form easily understood by the average person.

Throughout the study, Dr. Grace E. Williams, assistant professor and medical examiner for the Student Health Service of the State University of Iowa, served as medical consultant and adviser, and the aid of a number of prominent allergists was enlisted.

It should be emphasized here that in questions of allergic disorders it is important that a reliable doctor be consulted always, and a word of caution should be issued against the enthusiasm of the many who would try to explain almost everything on an allergic basis.

The word allergy is now generally used to designate all forms of hypersensitivity in man. It has been defined "as any departure from the normal response of the tissues to contact with a foreign substance" (1). Certain stimuli which are harmless for the normal person may cause severe symptoms when the allergic patient comes in contact with them by ingestion, inhalation, or external contact.

We are inclined to view allergic diseases as something rather recent in medical history because so much publicity is accorded to them at present. However, we find a description of an allergic manifestation, asthma, as early as the Book of Exodus. According to Balyeat (2), the possible relation between household commodities and asthma was mentioned first in 1575, when Jerome Cardan, a great clinician in Padua, was called to Edinburgh to see the Archbishop, who had been suffering from asthma for many months. He studied his condition very carefully and finally advised the Archbishop to change certain articles of diet and to get rid of the feather bed on which he was sleeping. The Archbishop was so pleased with his seemingly miraculous recovery that he doubled the fee agreed upon. It is no doubt true that Jerome Cardan had no conception of the present-day theory of hypersensitiveness to feathers, but his broad clinical experience made it evident to him that in some cases there was a definite relationship between feathers and asthma.

Henry Hyde Salter in 1858 published his classical work describing cases of asthma and hay fever due to animal emanations. He himself was a sufferer from what he termed "cat-asthma"; and although his wife and medical confreres laughed at his idea, "before his death he showed that ani-

[1] Based on a study made by Louise Stedman at the State University of Iowa.

mal emanations from practically any animal are not uncommonly the sole, and often the contributing factor in asthma" (2).

Recently great advancement has been made in the discovery of newer methods of determining the etiologic factors in allergic syndromes other than hay fever and asthma, namely, migraine, urticaria, contact dermatitis, and certain forms of eczema and colitis (2). With the newer methods of determining the etiologic factors and the more practical methods of treatment, much can be done for the relief of those suffering from allergic diseases.

In recent literature, large numbers of persons are credited as sufferers from some form of allergy. In 1931 it was estimated that fully 10 per cent of the population of the United States suffered from a form of allergy (3); in 1936, that 15 per cent of the population were involved (2). This estimated increase is thought to be due not to the increase of such diseases but to the fact that more cases are being brought to the attention of doctors and that more forms of disease are being classified as allergic.

At one time the question arose as to whether it might be termed a rich man's disease, but this is explained by the fact that persons in the upper-income levels can more easily consult doctors than those with lower incomes.

Authorities are not in agreement as to whether or not one sex is more affected than the other. Peshkin (4) reports that in the first decade of life boys are affected more often than girls, sometimes in a proportion of 2 to 1. Kelly and Eldred (5) report that twice as many male as female babies have eczema; that from the second to the fifth decade, females are more frequently affected than males; and after that males are again more commonly affected. Stewart (6) holds that sex is not a factor.

The racial strain may have some bearing on the susceptibility to allergic disorders. It is not an uncommon ailment among Negroes, but it is relatively uncommon among Indians, Japanese, Chinese, and native South Americans (7). Although all races are more or less susceptible, the white race seems most commonly affected (8).

Inheritance is an important factor in allergy. Most writers agree that the tendency to become sensitive to a foreign substance after sufficient contact with that substance, is inherited, but not the actual disease. Thus, we may find employees in woolen factories who at first exhibit no reaction in handling the wool but later suffer to the extent of having to change employment to obtain relief.

There are a number of secondary factors not explainable by heredity and environment which need further clarification.

The first clinically recognized forms of allergy were hay fever and asthma; eczema was added later, and after that allergic rhinitis, then urticaria and gastro-intestinal disturbances.

The following conditions have been reported to be of allergic origin of either primary or secondary importance: migraine, allergic headache, canker sores, conjunctivitis, atopic and contact dermatoses, epilepsy, and sinusitis. Some writers have gone so far as to claim allergic origin for acne, angio-neurotic edema, arthritis, pollen enureses, purpura, and tinnitus.

Almost any portion of the body may be involved, the particular symptoms depending upon the tissues affected. If the eyes and nose are affected, the result may be hay fever or conjunctivitis; if the bronchial mucous membrane, asthma; if the brain tissue, recurrent headaches classified as either ordinary or migraine, or epilepsy; if the lungs, asthma, spasmodic croup, or spasmodic bronchitis; if gastric or intestinal mucous membrane and digestive organs, digestive disturbances, intestinal colic, diarrhea, mucous colitis, gaseous distention, or symptoms simulating appendicitis or gastric

ulcer; if the skin, urticaria, eczema, angioneurotic edema, general or localized puritis, or some other skin disease.

The problem of allergy is one with which every physician comes in contact.

Where only one specific irritant is responsible, the patient himself may be able to determine and remove the offending substance, but the majority of cases are not so simple. Many of them require a great deal of time, patience, and perseverance on the part of the physician in determining the cause.

No doubt his diagnostic procedure will include many tests of the dermal, intradermal, patch, nasal, or ophthalmic type. In no case do allergists consider the results of these tests final, for a positive reaction may indicate past, present, or potential sensitivity.

Authorities agree that the most valuable and accurate method of determining the sensitivity of a person is by the elimination or addition of articles in the environment. The patient should be put in a room with a bare floor, smooth wallpaper, and without upholstered furniture. A thoroughly clean mattress, preferably not of horse hair, should be used, and a silk floss or cotton pillow substituted for a feather one. By returning the former articles of the environment piece by piece, the cause of the trouble may be discovered. It may be found to be a substance that gave a negative reaction to other forms of testing.

Various methods of treatment may be used: Certain drugs may be prescribed to afford temporary relief; desensitization is possible although seldom necessary or advisable; complete elimination of the offending substance is the most satisfactory of all treatments.

Textile fibers and closely related substances used in wearing apparel or house furnishings are an exceedingly important cause of allergic manifestations. In fact, Prickman (9) says that "air-borne substances such as common textile fibers, animal emanations, feathers, leather, rubber, dyes, etc., are much more important than foods as allergens."

Although there seem to be an unlimited variety of fabrics on the market, they represent a comparatively small number of raw materials. During manufacture, the ability of the raw materials to cause allergic reactions may be either increased or lessened; substances which in themselves are not harmful may become offenders after having been dyed or finished. Hence, many seemingly insignificant factors must be considered.

Stewart (6) says that if a textile fiber is proved to be an offender it may not be necessary to remove it from the wardrobe of the sufferer. Quite often he may wear the fiber to which he is allergic, if the weave is firm and smooth and provided there is no eruption on the skin and its surface is not broken in any manner. In loosely woven, napped surfaces the small particles of fiber may brush off, be inhaled, and cause some allergic manifestation. For example, a woman allergic to wool must forego the pleasures of knitting unless the yarn which she uses is of a very hard twist with no loose fibers; or a suede jacket may be out of the question because of its napped surface, while a smooth leather jacket may be worn without ill effects. A person allergic to a particular fiber is much more apt to develop an allergic manifestation if the fabric has a rough surface which may irritate the skin and cause it to break. If an eruption or break does occur, another fiber must be worn while the disturbance is being treated.

Cotton. The ingestion of cottonseed products or the inhalation of dust from cotton may produce allergic manifestations such as asthma, hyperesthetic rhinitis, perennial vasomotor rhinitis, abdominal and cutaneous symptoms. According to Coca (10), "The oil of the cottonseed con-

tains an active atopen and may therefore induce symptoms as inhalant, ingestant, or contactant." This is very potent, and even minute amounts may produce a reaction. Inferior grades of cotton fabrics may contain considerable amounts of the dry, pulverized seed, Rowe (11) stating, for example, that "cotton fabrics or thread of the purest quality may contain enough allergen to produce severe symptoms in certain people." In many products the atopen is destroyed as a result of manufacture. Since there are many varieties and species of cotton-yielding plants, it may be possible to become hypersensitive to a particular variety.

Cotton fabrics are not always easily recognized because they may be sold under names and appearances suggestive of linen or wool. Unspun cotton may be used for stuffing mattresses and upholstered furniture, pillows, quilts, comforts, padding for robes, medical and surgical purposes, and children's toys. The linters may be made into cotton batting or wadding, and the lint may be used in felt. Cottonseed oil is used by bleachers for removing off-color spots from clothing, and it is employed in the preparation of turkey-red oil for dyeing and printing textiles (10).

Flax. Flaxseed is a very potent allergen which, acting as an ingestant, inhalant, and contactant, may cause gastro-intestinal, respiratory, and cutaneous disturbances; but according to Coca (10), "it is doubtful whether the fibers of the flax plant cause symptoms in those sensitive to the seed." In a review of the literature on the subject, Grant (12) says, "In all cases reported, the sensitization was to flaxseed itself, not to linseed oil, linen or substances made from flax fiber, although cases sensitive to the latter may exist."

The fiber is used in a variety of fabrics and rugs. The stalks may be spun into yarn, twine, canvas, or coarse linen. Flax straw is used as a coarse stuffing for couches, automobile seats, and cushions. The lint is sometimes used for wadding and batting. Linseed oil is employed in the manufacture of linoleum, oilcloth, cork lino, oil silk, patent and enameled leather, imitation leather, waterproof stuffs, carriage tops, oil skins, and artificial leather.

Kapok. Kapok is now more frequently considered an allergen than formerly and "more harmful than feathers" (13). Although it may give no trouble at first, with use the fibers become dry and brittle, causing a fine dust which escapes through the outer covering of the pillow, mattress, or upholstery stuffed with kapok. Inhalation of this dust may cause such allergic manifestations as asthma, vernal catarrh, hay fever, and eczema.

The kapok fiber cannot be spun into a satisfactory yarn for use in textiles, but it is valuable for stuffing pillows, mattresses, cushions, and upholstered furniture and in the manufacture of life belts. Coca (10) has found that "many supposedly pure kapok preparations contain cotton. For this reason, kapok should never be employed as a substitute for cotton in cases sensitive to the latter."

Rayon. Little reference has been made to rayon in the writings on allergy; however, Prickman (9) says:

> Synthetic fibers have been reported to act as irritating substances or specific antigens. The irritating substance may be either the original material or the dyes or other substances used in the manufacture of these materials.

Adams (14) states that in his experience rayon waste has proved to be one of the safest non-allergic upholstery stuffing materials.

Silk. This is one of the most powerful atopens, and a hypersensitiveness to it has been reported as the cause of various allergic manifestations, including constitutional reactions, asthma, nasal allergy, chronic conjunctivitis, and skin manifestations, such as urticaria and eczema.

Coca (10) considers silk a more frequent offender as a contactant than as an inhalant. However, Figley and Parkhurst (15) state:

> There is little or nothing in medical literature to substantiate the conception of silk as an excitant of contact dermatitis. On the other hand, all evidence points to its role as an atopen of the inhalant type.
>
> It is our belief that in those rare cases in which wearing silk may have caused a contact dermatitis, the skin eruption was effected by some substance with which the silk was weighted or dyed.

Silk frays readily and may be a factor in household dust. It is used most commonly for thread, floss, clothing, and decorative fabrics. A number of articles and fabrics sold under names suggestive of silk contain little or none.

Wool. Sensitivity to wool, especially in atopic individuals, is surprisingly low. It is much more apt to cause contact reactions, such as urticaria or dermatitis, than respiratory symptoms (7), although it is occasionally the cause of asthma (10). Wool is much more frequently an offender in crude form than in its finished state. This may be accounted for by the fact that it undergoes a great amount of physical and chemical treatment before it reaches the consumer. It is obtained from many varieties of sheep, and Feinberg (7) suggests that "specificity as to species may exist as regards sensitization." Wool is used in the household in many ways in addition to woven cloth; it is used in knitted garments, felt, and carpets; unspun wool is used in sheepskin coats, stuffing for mattresses, padding for robes and quilts, and children's toys.

Animal emanations. Many writers class the animal epiderms as the most important source of respiratory allergy, and Balyeat (2) assures us that contact sensitiveness to them may result in urticaria and dermatitis.

Actual contact with the animal presents a small problem compared with that of tracing the presence of its dander or scurf in industrial products. Identification is difficult because of the extensive use of animal hairs in upholstery, rugs, draperies, bedding, and wearing apparel.

A brief summary of the garment and household uses of hairs from the common animals follows:

Camel. Camel's hair may occur in knitted and woven dress fabrics, beltings, blankets, carpets, rugs, and hair brushes. Some materials sold under the name of camel's hair are made entirely of sheep's wool.

Cat. Pelts of the domestic cat are being used increasingly to simulate more costly furs, for carriage robes, for lining such articles as caps, coats, gloves, and slippers, and as a covering for toy animals. The hair may be used as an adulterant of horse-hair stuffing in bedding and furniture.

Cow. Cow hair may be found in a wide variety of places: hair mattresses, carpet padding, coarse blankets, steamer rugs, carpets, Chinese rugs, cheap plushes, upholstery, stuffing materials for sofas and chair cushions, cheap felted goods, felt for roofing, insulating materials, toy animals, and in a mixture of mortar and plaster. Calf skins are sometimes used as fur.

Dog. Dog skins may be used like fur in coats, rugs, robes, and linings. Sometimes dog hair is combined with wool in Chinese rugs.

Goat. Goat hair is used extensively in carpets, rugs, rope, coarse waterproof fabrics, brushes, and mops. The poorest qualities go into plaster. Goat pelts may be made into carriage robes, muffs, coats, and trimmings.

Mohair, obtained from a special kind of goat, is used in furniture plush, upholstery for railway cars, coat linings, men's summer suits, dress goods, braids, wigs, rugs, couch covers, table covers, curtain materials, and the stuffing of furniture and cushions.

Angora, also obtained from a kind of goat, is used in similar articles and in gloves, socks, lace, shawls, Oriental rugs, blankets, felt hats, brushes, dolls' hair, and wigs. It may be mixed with human hair and used for wigs and braids for women. It may be used also in pillows, cushions, and mattresses.

Hog. Hog hair may be used for stuffing upholstered furniture, mattresses, and automobile cushions; for insulation purposes; and for bristles in hair- and toothbrushes.

Horse. "Long hairs from the manes and tails of horses are woven into cloth to be used for:

covering sofas, chairs, and seats of railroad cars; under the name of 'crinoline' for lining and padding clothes; lining shoes, making gloves, press cloths, sacks and bags.

"Mane and tail hairs of medium length are made into clothes-, hair-, shoe-, and toothbrushes . . . they make excellent stuffing materials for automobile seats, cushions, furniture, mattresses and pillows.

"The true or body hairs of horses are utilized in the manufacture of felt hats and in the textile industries" (7).

Colt and pony skins may be used as furs.

Rabbit. Rabbit fur is sold under many trade names. The hair may be used in felt hats, on the sounding hammers of pianos, as insulation in refrigerators and buildings, and in shoes. It is used in the stuffing of cushions, mattresses, pillows, and quilts. The hair of the Angora rabbit is used for "making all kinds of infant's wear, hand knitted trimming, crochet work, millinery trimmings, underwear, gloves, hosiery, and knee pads for invalids and rheumatic patients" (10).

Feathers. Feathers are important factors in skin manifestations and respiratory symptoms.

If one is sensitive to the feathers in the pillow it does not necessarily follow that one will have asthma every night and all night. The paroxysms may come on at various times of the night or even day, and they may occur irregularly (7).

Balyeat (2) reports that:

Of one hundred cases of children under fourteen years of age suffering from asthma we found 41 per cent sensitive to chicken feathers, 35 per cent sensitive to goose feathers, and 31 per cent sensitive to duck feathers. 26 per cent of the cases were sensitive to all three. Feathers appear to play a very important role in the cause of asthma. In 16 per cent of the cases just mentioned they were the sole cause.

Feathers and down from various types of fowl are used for stuffing pillows, cushions, mattresses, quilts, and upholstery and in making feather dusters, millinery specialties, artificial flowers, and dress fabrics. Wild and domestic birds supply feathers and bird skins for millinery, muffs, and trimmings. All of these may be considered possible sources of irritation, and in addition "parrots, canaries, pigeons, sparrows, grouse and other birds have been known to cause asthma and vasomotor rhinitis" (10).

Furs. As a group, the furs are considered a very important causative factor in such allergic manifestations as vasomotor rhinitis, dermatitis, and urticaria. Vaughan (3) states that the wearing of fur-lined gloves commonly causes chapping and cracking of the hands. While this is usually attributed to the cold, the lesions will disappear when unlined gloves are substituted, even though they may not be as warm. Fur dermatitis may be seen rather commonly in the winter on women's necks and wrists. Occasionally one finds hay fever or asthma due entirely or partially to the fur trimming on a dress or coat, a neck piece, or a fur coat worn by the sufferer (2).

Dyeing of furs greatly reduces the chances of the fur itself being a factor in causing the allergic symptoms, but it introduces a new factor, that of the dye. Of the dyed furs, so-called fox is most often the offender; and of the colors, black and brown are much more commonly the source of trouble (16).

Dyes. The dye contained in any article may be the source of asthma, vasomotor rhinitis, or dermatitis in sensitive individuals. Dermatitis is probably by far the more common complaint. Injury to the skin, irritation, and dampness (including perspiration) may make the conditions more favorable for the onset of the dermatitis.

While furs have hitherto been the chief source of the complaint, there is an increasing disposition to blame attacks of dermatitis on to fabrics. . . . Of the three fur dyes in common use, the oxidation dyes, of which the commonest are p-phenylenediamine, dimethyl p-phenylenediamine, aminophenol and toluylene diamines, . . . are much the most frequent causes of irritation (17).

Considering the number of yards of dyed fabrics in constant use, the number of cases

of dermatitis is small, but it is not negligible. Almost any synthetic dye if applied to a sufficient number of persons will be found to irritate one or two. Vat dyes are not often concerned in cases of dermatitis (18). A well-fixed dye, not transferable to the skin, can hardly be considered harmful. However, dyes may be active irritants if they are present in a free state or loosely held in the material so that they may be transferred to the wearer's skin in some quantity by the action of perspiration.

Goods dyed in a sulfuric acid bath may contain enough acid after finishing to cause irritation on a delicate skin. Woolen goods are apt to contain one or more of the irritant dyes. Socks are a frequent source of complaint because they are likely to be worn for many hours under conditions of close contact, increased humidity, and at a temperature higher than that of the normal body.

Leather. Old and rotting leather materials particularly have been found likely to produce allergic symptoms (7). Many complaints concerning leather may be due to heat and perspiration; some may be due either to free amino compounds used in the dyeing or to traces of soluble chromates resulting from leveling up of the color (18).

Lewis (19) emphasizes the fact that a patient showing hypersensitiveness to shoe leather can learn only through experience whether a given pair of shoes will prove to be irritating. This is true because

> since none of the large manufacturers of shoes use leather from a single source, it is difficult, if not impossible to trace the manufacturer who made the leather in a pair of shoes. The tanning processes of every manufacturer of leather are distinctive, and the details are kept secret.

Rubber. Some individuals have exhibited a marked reaction from rubber direct from the tree, but more cases have been reported from the manufactured product, particularly rubber gloves. "Acids, alkalies and solvents used in rubber manufacture often cause dermatitis" (20).

House dust. House-dust sensitization may be a factor in perennial vasomotor rhinitis, bronchial asthma, neurodermatitis, migraine, and either atopic or contact eczema. There has been much discussion as to the nature of the atopen causing the reaction. Rowe (11) states that

> Housedust arises chiefly from materials of animal epidermal origin which furnish the home. Of these, feather pillows, hair mattresses, woolen blankets and carpets give rise to surprising amounts of dust. Housedust may also contain rabbit and goat hair from upholstery . . . and matting dusts, as well as many others peculiar to each environment. To any of these the allergic person may become sensitive . . . . In fact the dust reaction might be a summation one due to slight sensitizations to various animal emanations, pollens or other substances present in the same dust extract.

It should be emphasized that, whenever possible, elimination of the offending substance is the most satisfactory treatment of allergic disorders. In this case, the home must be kept as free from dust as possible. Except for morning airing and night ventilation, the windows and doors should be closed. The rooms should be given a thorough cleaning daily with well-oiled mops and cloths. The closet should contain only the garments the patient is wearing; it should not be used for storage. In extreme cases it may be necessary to clear the bedroom and clean and scrub it thoroughly. The bed should be dusted outside the room with a well-oiled cloth, or, if possible, washed with the hose; and the mattress and pillows should be covered with an impenetrable substance. Only the essential furniture, thoroughly dusted, should be returned to the room. The rugs, curtains, and bedding should be planned to lend themselves to frequent and easy laundering.

Household objects. Pillows, mattresses, bedding, upholstered furniture, and rugs

have been mentioned very frequently as possible sources of allergic sensitivity. The article when new may cause no trouble, but aging may result in the formation of a fine dust which acts as an irritant.

Various remedies may be prescribed. The article may be covered in such a way that the contents cannot possibly escape. Covers may be made of nainsook treated with latex, rubber sheeting, oiled silk, or oilcloth; and the seams should be stitched in such a way that they are dust proof. If the covers are to be removable, zippers may be used. Where expense is an item, heavy wrapping paper may be used to cover the mattress; or where it is not important, non-allergic products may be purchased from companies specializing in their manufacture.

In considering the disposition to be made of household articles which cannot be covered satisfactorily, it is wise to consider the particular individual concerned.

The homemaker comes into very close contact with the furniture, and it may be necessary to remove it if she is allergic to any of the substances in its make-up. In many cases she may be advised not to do the dusting or sweeping because these stir up small particles of fiber and facilitate their inhalation; she may even be advised to remain away from home while the cleaning is being done.

The child may tend to romp on the rugs and furniture and thus cause the offending substance to be loosened into the air and inhaled. It may be wise to substitute another type of furnishings for his special benefit.

If the man in the family is allergic to substances contained in the upholstery, it is not likely to be so necessary to remove it. If he is gone all day and nothing is done to agitate the substance while he is at home, his contact with it is very small.

Stewart (21) says that one of the most difficult aspects in treating patients is "the education of the patient to the need of absolute elimination of the offending factor and the results of slight contact with the same, also the education of the family so that they will cooperate and follow directions."

Conclusions. From our survey of the literature, it seems safe to draw the following conclusions:

1. Allergy may be considered a reaction exhibited by certain individuals toward a substance which in a normal person would elicit no response.

2. Allergic reaction to textiles and related substances is a relatively common allergic manifestation.

3. Much of the work concerning the problem of allergy needs further verification before it can be accepted as final.

4. In a discussion of allergy, care must be taken to avoid making general statements from the results of individual case studies, for they may apply only to special conditions of the case.

5. Whenever possible, elimination of the offending substances is the best method of treatment for allergic individuals.

6. Desensitization is seldom advised for persons allergic to textiles and related substances unless elimination is found impossible.

7. If an individual is allergic to a particular textile fiber, it may not be necessary to prohibit the wearing of articles containing this fiber. If the weave is firm and the material smooth, the garment may not offend.

8. A knowledge of the fiber content, dyes, and finishing agents of fabrics and household furnishings will enable the allergic individual to avoid contact with those which are likely to offend.

9. Accurate labeling is absolutely essential if a satisfactory selection of household and garment textiles and of household furnishings is to be possible for the allergic individual.

REFERENCES

1. The problem of allergy (Editorial). *Am. Med.* **41** (1935) p. 307.
2. Balyeat, Ray M., and Bowen, R. *Allergic Diseases, Their Diagnosis and Treatment.* Philadelphia: F. A. Davis, 1936, 516 pp.
3. Vaughan, W. T. *Allergy and Applied Immunology.* St. Louis: C. V. Mosby Co., 1931, 359 pp.
4. Peshkin, M. Asthma in children. I. Etiology. *Am. J. Diseases Children* **31** (1926) p. 763.
5. Kelly, D., and Eldred, M. M. Why the baby has eczema. *Hygeia* **13** (1935) pp. 436–438, 705–707.
6. Stewart, Zella White. Stewart Asthma and Hay Fever Clinic, Iowa City, Iowa. Personal interview, July 5, 1937.
7. Feinberg, S. M. Household objects as causes of hypersensitiveness. *J. Lab. & Clin. Med.* **13** (1927) p. 220.
8. Hansel, French K. *Allergy of the Nose and Paranasal Sinuses.* St. Louis: C. V. Mosby Co., 1936, 820 pp.
9. Prickman, L. E. Mayo Clinic, Rochester, Minn. Personal correspondence, June 24, 1937.
10. Coca, A. F., Walzer, M., and Thommen, A. A. *Asthma and Hayfever in Theory and Practice.* Springfield, Ill.: C. C. Thomas, 1931, 3 parts in 1 vol.
11. Rowe, A. H. Allergy: Recognized causes. *Northwest Med.* **34** (1935) pp. 371, 434.
12. Grant, Lucille R. Report of six cases of flaxseed sensitization with review of the literature. *J. Allergy* **3** (1931) p. 469.
13. Wagner, M. D., and Rackemann, Francis M. Kapok. *J. Allergy* **7** (1936) pp. 224–233.
14. Adams, Harold B. Common allergic disorders. *J. Pediat.* **8** (1936) pp. 558–561.
15. Figley, K. D., and Parkhurst, H. J. Silk sensitivity with especial reference to its role in atopic eczema. *J. Allergy* **5** (1933) pp. 60–69.
16. Cole, Harold N. Investigation of injuries from hair dyes, dyed furs and cosmetics. *J. Am. Med. Assocn.* **88** (1927) p. 397.
17. Freedland, V. D. Precautions against dermatitis from textiles. *Textile Colorist* **57** (1935) p. 309.
18. Cox, H. E. The chemical aspects of dermatitis. *Textile Colorist* **58** (1936) pp. 842–845.
19. Lewis, George M. Dermatitis Venenata due to shoe leather. *Arch. Dermatology & Syphilology* **26** (1932) pp. 707–709.
20. Schwarts, Louis. Skin hazards in American industry. Pub. Health Bull. No. 215 (1933) 54 pp.
21. Stewart, Zella White. Sanitarium treatment of asthma and other allergic conditions. *Med. Woman's J.* **37** (1930) pp. 271–274.

SIGNS OF THE TIMES

NATIONAL ASSOCIATION OF HOUSING OFFICIALS CONFERENCE

LEILA F. VENABLE

The National Association of Housing Officials held its fifth annual conference in Cleveland, Ohio, from November 18 to 20, 1937. Members and friends of the Association sat in conference analyzing the problems inherent in any public housing program, reviewing the successes and failures of P.W.A. housing projects, and contemplating future policies and possible lines of procedure. Although up to the present home economists have not participated conspicuously in this development, it offers them manifold opportunities.

President Roosevelt's signature to the Wagner-Steagall Housing Bill on September 3, 1937,[1] released federal money for construction, repair, and remodeling of homes for the moderate- and low-income classes—with certain restrictions. The bill provides that the initiation of a program for home building, subsidized by the government, shall come from the local community itself rather than from the federal government, as has been the case hitherto. P.W.A. housing projects as a measure for national recovery are something of the past; new public housing enterprises will be embarked upon only at the expressed wish of the local community accompanied by evidence of need for housing and an assurance of faith and ability to assume part of the financial obligation thereof. The citizens of the United States, therefore, will be housed only as well as their local communities demand; and this demand will be in direct proportion to the degree to which the public in general realizes the value of having all its people adequately housed.

The general theme of discussion heard again and again at Cleveland was to the effect that to accomplish the general purposes for which this law was conceived, there must be an informed, intelligent public to back it—a public which understands why housing is its own problem. The pressing need of the moment is propaganda for housing—propaganda of a sound character and from various sources. It is interesting to note that 192 schools are now teaching something on housing. Dr. Edith Elmer Wood, in commenting on education needed for housing, voiced the opinion that widespread public sentiment is necessary; that there should be immediate education for the adult and long-range education for youth; and that instruction should include the features of housing necessary for health, convenience, and amenity. Teaching and instruction need not be confined to our schools; public officials should be aroused; men's and women's clubs and other organized groups ought to understand the social results of bad housing and be stirred to active participation in its correction.

Local authorities will receive government subsidy only on presentation of a building program satisfactory to the United States Housing Authority, whose administrator is Nathan Straus. Surveys of the community must be made which will show the extent of bad housing, the amount of demolition necessary, the real need for housing, the intended area for new construction, the ability of the local com-

[1] See JOURNAL OF HOME ECONOMICS, Vol. 29 (Nov. 1937), pp. 631–635; (Dec. 1937), pp. 687–690.

munity to assume the required 10 per cent of the costs of financing the project. Persons able to collect relevant data and to interpret it in terms of social need will be called into service. Persons having a knowledge of the family and factors necessary for its growth and development—work, rest, and play—will be of special service to the community in its final analysis of needs and determination of standards necessary for general welfare.

Physical standards must be set. Discussions at Cleveland brought out the fact that in spite of the recent program, there is not as yet any general agreement on what constitutes basic minimum standards for housing. The trend is toward the establishment of basic standards having some flexibility and for moderate rather than ideal standards. The home economist can be a valuable contributing member of any group compiling basic standards for housing. Especially is this true of the student of standards of living who has a clear conception of the levels possible for different income classes and of those maintained by various occupational and income groups. A contribution is equally possible from the student of family relationships and from those who have made a study of the various activities carried on in the household and the equipment necessary for them.

The task of perfecting a national housing program by no means ceases with the grant of a subsidy and the completion of housing units. Such public housing must be guided (managed) by a core of efficient workers if the public is to realize expected returns from its investment. Houses occupied by renters or potential owners must be cared for and efficiently used so that maintenance costs may be reduced to a minimum. The resident, falling as he does into the moderate- and low-income brackets, is subject to intermittent employment and income fluctuation; his financial obligation to his family and to his local, state, and federal governments will be met only through careful planning of the use of all resources. Family budgeting, wise spending, intelligent consumption must constitute his major considerations; these require careful guidance.

The home economist has an enviable position awaiting her in the national program of low-cost housing. She is a member of one of the groups who have an intimate knowledge of the real needs of the family and its individual members—needs for personal growth and development, for general welfare and satisfactions. Can she fail to take it? To quote Charles D. McGinnis, "It is hoped that in a spirit of enlightened patriotism all interests which can assist will not fail."

THE PENNSYLVANIA EXTENSION SERVICE

MARGARET BROWN

See Pennsylvania! This is the greeting which the home economists on the staff of the extension service extend to all home economists attending the American Home Economics Association convention in June. Everyone will be well repaid who spends a week or two exploring some of the many points of historic interest and places of natural beauty in the state.

In whatever county you visit, you will find at the county seat an Agricultural Extension Association office. Here are located the county representatives both in agriculture and home economics. They will welcome you to the county and will gladly give any assistance in making your visit enjoyable. In the very center of the state, in the midst of beautiful mountains but reached by excellent roads, is the Pennsylvania State College. No one will regret the time taken to see this historic campus. The state extension staff will welcome a visit and an opportunity to tell personally

of the interesting things being done through the extension service.

There are no county club agents in the state. Home economics and agricultural county agents conduct both adult and 4-H work. The bulk of club work in nearly all counties is done during the summer, with occasional social meetings during the winter months. Clothing interests more club girls than any other type of work. There is a gradual increase in the number of clubs studying foods and room improvement.

Women in the state have been anxious to know more about materials they use in home furnishings and clothing. In answer to requests, the clothing specialists have prepared a series of leaflets on different fibers and their identification. These leaflets have been distributed in the various counties among groups conducted by the county worker. In 26 counties the specialists have also discussed buying for the family with groups of women, groups of girls, and with combined groups of men, women, boys, and girls. The response has shown that men and boys as well as women and girls are interested in these problems.

Like those of many other states, rural homes of Pennsylvania have been reluctant to make changes. The rural homemaker, however, is more and more realizing the value of having a well-planned time and labor-saving place to work in. Last year 41 counties were actively interested in improving kitchens. The improvements took a great variety of forms, from adding small conveniences to entire remodeling of the kitchen. One carpenter was a little loath to make a storage unit according to the plans of the homemaker and her county home economics worker. The ideas were new to him, and he was doubtful of their practicability. However, when he had finished, he stood back and surveyed it, then said, "That's all right; I guess I'll go home and make one just like it for my wife." Since then he has incorporated the same type of storage space in the new kitchens on which he has worked. The kitchen improvements have in some cases led to changes in other parts of the home.

During the summer, from early June on, recreation and leadership camps are held both for women and for 4-H clubs.

Seven women's camps with 15 counties participating were held last year, and the number will no doubt be greater this year. Responsibility for planning and conducting these camps has been shared by the executive committees of the county agricultural extension association, leaders in various communities in the county, and the home economics county extension worker. Specialists in agriculture and in home economics from the State College gave assistance. At all of the camps, each day was planned so that there was free time for doing whatever one wished. In spite of the fact that there are no large lakes in Pennsylvania, nearly all the camps have facilities for swimming, a recreation enjoyed by many of the campers. There were educational and inspirational talks, including travel talks, by specialists and the local county worker. Some handicraft work each day satisfied the creative desire in all of us. Vespers and campfire programs were always in charge of the campers themselves.

Fifty-one counties participated in 4-H club camps. Only one county had its own camp. There were four district girls' camps, and two districts combined boys' and girls' camps. In all, 537 girls had the privilege of four days of camp life during the summer. Each camper cared for her own quarters. There was a period for educational work. One year they took up the study of bugs and made collections. Another year they studied trees. A specialist from the College gave a background for this study and guided the boys and girls in arranging their collections. Each boy or girl made his own choice among the

recreations offered. There were swimming periods, rest periods, and hikes. Sometimes the hike ended in a surprise, such as a lunch in the woods. After the noon meal, there was a short music period. Vespers and campfires were in charge of the 4-H members.

These are only a few of the things by means of which people of Pennsylvania are developing themselves. Come and see our state and know our people.

A DEMONSTRATION TRUCK FOR A MODEL KITCHEN

AZALEA SAGER

As economic pressure lessened somewhat during the past year, Oregon farm homemakers began asking for assistance in freshening the home furniture, planning a time-saving kitchen, remodeling the whole house, and even planning a new one. The majority of the requests pertained to the kitchen, and so a traveling farm kitchen demonstration was prepared to bring practical help to the farm family as quickly as possible. A recent study made in Oregon on "How Farm Families Use Their Time" had shown that the average work period of the farm homemaker was 63.7 hours per week, homemaking activities taking 81 per cent, farm work 18 per cent, and other work 1 per cent of this. Of the 51.6 hours a week devoted to homemaking activities, 47 per cent was spent on activities connected with food. A modern kitchen, efficiently planned both as to step saving and time saving, would make a great difference in this figure.

The demonstration project was a cooperative one in which agricultural and home economics extension, home economics research, and agricultural engineering together planned the project, supervised the construction, and operated the demonstration. The General Electric Company had loaned to Oregon State College a car and trailer which could be used for the exhibit. The trailer was a very attractive white colonial-style house with green shutters. The construction of the kitchen units and the transportation were financed by the Extension Service in Agriculture and the Agricultural Engineering Research Foundation.

The agricultural engineering department, through its architecture division, planned and supervised the construction of the exhibit; the extension specialist in home furnishings supervised the interior decoration, such as finishes for walls, woodwork, and floors; covering for working surfaces; color schemes; and lighting. The state home demonstration leader was in general charge of the project.

To Maud Wilson, in charge of home economics research at Oregon State College and a nationally known authority on housing, was assigned the planning of the kitchen. She not only planned the arrangement of the room and the placing of the equipment but also designed the work units and built-in equipment. The work units include the sink unit with its dish and supply cupboards; the mixing space and its supply cupboards; the floor-to-ceiling cabinet for storage of cooking utensils; the food storage space, which consisted of both a cooler and a refrigerator; and the stove unit adjoining the floor-to-ceiling utensil cabinet and the woodbox.

Besides the work unit for food preparation, the kitchen contains a breakfast center and near this a business unit which includes a floor-to-ceiling cabinet for farm account books, bulletins, and letters. This convenient farm kitchen also provided a play space for the small children, with a storage space for toys and a workbench for the little fellow. Even the father was provided with a drawer for the tools and equipment which he might need in the home.

In planning the kitchen demonstration,

there was a stove and fuel problem to consider. Western Oregon farm homes have an abundant supply of wood for fuel, and they are also fairly well supplied with electricity. So the question arose, should this convenient kitchen have a large wood range and an electric plate, a small wood range and a small electric stove, or a combination wood and electric range?

After a survey of the homes in counties which have demonstration agents and in which all types of stoves and stove combinations have been used, the conclusion was reached that the demonstration should be equipped with a combination wood and electric range. However, in building a new home, sufficient stove space to permit a small wood range and a small electric stove was advised. In eastern Oregon, where the wood supply is not so abundant and electricity is fairly economical and available, an electric stove is used in the demonstration.

Besides the kitchen in the interior of the trailer, there was arranged on the exterior a display of various electrical appliances used on the farm and in the home. Articles displayed for use in the home included a vacuum cleaner, washing machine, refrigerator, iron, toaster, and mixer; while farm appliances included a milking machine, a water pump, and a feed grinder. When one of these appliances was put into action, a meter showed the cost of operating it per hour. The trailer also carried an automatic slide machine which displayed colored prints of various farm and home activities.

During August, September, and October of 1937, the traveling farm-kitchen demonstration went to fourteen counties in western Oregon, where 19,742 men and women visited it. A written record was kept of the persons who contemplated building or remodeling in the counties served by home demonstration agents so that follow-up work could be done with them. Of these, 7,254 were recorded in six home demonstration agent counties. In many instances the men and women came back a second time to get some detail they had overlooked the first time. The demonstration was of interest not only to those who were planning to build or to remodel their own kitchens but also to contractors, builders, and hardware men.

During the tour, Mr. Everett Davis, specialist in agricultural engineering, was in charge of the demonstration of electrical equipment; and Mrs. Louise Harwood, home demonstration agent-at-large, was in charge of the kitchen demonstration.

In order to give further practical aid to farm families, a bulletin has been prepared entitled "Planning the Convenient Farm Kitchen." Working drawings of the various units are available free to Oregon farm families.

In 1938 the demonstration will be exhibited in eastern Oregon. The purpose of this demonstration is to show that convenient and modern kitchens can be constructed at moderate cost. The traveling kitchen represents the start of one phase of a long-time program in home management which, it is hoped, will ultimately reach all counties of the state.

EVIDENCES OF NEED FOR CONSUMER EDUCATION IN IDAHO PUBLIC SCHOOLS

ELSIE M. MAXWELL AND MRS. REVA CREE TWEEDY

A study of spending practices in which one fourth of the women students in the University of Idaho participated in the spring of 1937 revealed some significant factors regarding the background preparation of college women to meet their consumer problems and the ways in which these problems are met.

The study, conducted by the questionnaire method supplemented by personal

interviews, included inquiries regarding (1) family habits of handling money, (2) the student's ability to estimate college expenses, (3) the source and distribution of student incomes, and (4) the extent to which parents and schools contributed to consumer education.

The 175 women participating represented the four college years. Fifty-eight per cent were majors in home economics and 42 per cent were majors in the School of Business. Their financial circumstances varied widely as to both sources and amounts. One girl was totally self-supporting. Thirty-three per cent supplemented the allowance received from the family by part-time work. Sixty-seven per cent were financed entirely by their family or others.

Only 16.5 per cent of the families of the students had a budget system. One of these families and 22 of those without a budget plan reported discord where money matters were discussed. Over half the mothers had a joint bank account with their husbands; 12 per cent had an allowance; 18 per cent asked for money when they needed it; and 12 per cent earned all their own money.

Ten per cent of the university women had their first allowances when they entered college. Fifty per cent had used the system in either grades, high school, or both. In 11 cases, allowances were given to students whose mothers asked for money for their own and household expenses.

Most of the girls reported an attempt to estimate college costs before they entered. Thirty-three per cent reported an underestimate, for which they gave the following reasons stated in order of frequency: (1) need, either real or fancied, for more clothing; (2) lack of information regarding costs of textbooks and supplies; (3) lack of information regarding organization fees; (4) living expenses higher than estimated; (5) unexpectedly high expenses for recreation; (6) selecting courses which carry high fees; (7) medical care. The women recognized a tendency to base costs wishfully at the lowest figures indicated by the catalog, or to be unwilling to deny themselves more expensive choices when away from home restraint and in contact with more expensive college social privileges. They also felt that when they were living at home they had been unaware of the actual cost of incidental expenses.

Eighty-seven per cent recognized an effort on the part of their parents to give them an understanding of money management, choice-making, shopping experience, and accounting, but considered that this education had been casual and sketchy. Thirteen per cent recognized a significant contribution made by high school home economics classes, and 8 per cent reported some help from high school commercial classes.

An analysis of the data shows a considerable variety in the amount and distribution of expenditures. Some students spent four times as much money as others. First, the place of residence modified the spending practices. The 30 women who lived in their own homes and the 8 who worked in homes for their board and room paid on the average $10 a month for other running expenses. The 63 who lived in residence halls paid $26 for room and board and an average of $11.63 for other expenses, and the 63 who lived in sorority houses at $37.50 a month spent $17.65. The 11 who lived in co-operative houses paid $16 a month for board and room and an average of $8.80 a month for other running expenses; these co-operative house students lowered outside costs by sharing services and commodities, by limiting their recreation to that offered free by the university, and by curtailing the extent of goods and services purchased.

Certain other expenditures made by the students are shown in the accompanying

table. Clothing expenditures were reported in so many ways that no attempt was made to bring the figures together.

Monthly expenditures of 175 women students for certain groups of commodities and services

COMMODITY OR SERVICE	RANGE	MOST FREQUENT COST	AVERAGE
Food eaten between meals	$0.00 to 4.50		$2.48
Cosmetics	0.50 to 3.00	$1.25	0.91
Sanitary supplies	0.40 to 4.75	2.16	1.67
Movies	0.00 to 3.00	0.80	0.92
Care of clothing, cleaning	0.00 to 16.00	*	*
Laundry	0.10 to 3.00	*	*
Hosiery	0.50 to 4.80	0.95	2.48

* Not estimated because in cases where the work was done at home the students considered it cost nothing.

The figures and some of the supplemental information collected lead to several inferences which should challenge the thought of home economists: Although all the living places approved by the university furnished board and room, all but 6 of the 175 students reporting sometimes ate between meals; 38 per cent of them gave as the reason for this a dislike for the foods served at meals. This group included 26 per cent of the home economics women. Some of the students said they ate between meals for sociability, and others because they were hungry.

Home economics students said that although they used information gained in class in buying hose, they bought on the average 2.4 pairs per month. Of those purchased, 28 per cent were chiffon, 14 per cent service weight, and 58 per cent semi-service. Many girls reported that they bought the least expensive obtainable for dancing because, regardless of price, a pair will serve for only one dance.

In reply to questions about borrowing clothes from their friends, a few home economics students said they did this and 62 per cent said they borrowed accessories.

Summary. A study of the purchasing habits of women students at the University of Idaho shows that college women have many consumer problems, many of which are peculiar to life at college while others are closely related to family consumer problems. As a group, these women have a relatively large amount of money at their disposal, and they feel that they have not been trained to use it efficiently—an assumption verified by the data collected. Although parents had endeavored to meet their responsibilities in educating their daughters in making choices, buying, and the use of money, the indications are that this training had been neither intensive nor extensive enough to meet the needs of the girls. While a few of the high schools which the girls had attended were contributing somewhat to this training through home economics and commercial classes, on the whole they did not recognize either the problem or their opportunity to supplement parental training in preparing students to meet these vital economic questions.

HOW WOMEN PURCHASE SHOES

EDITH RHYNE AND FRIEDA MAE BENNETT

A study of the buying habits of 300 women in purchasing shoes was made in nine Oregon stores between August 4 and September 17, 1937. The stores were located in Portland, Salem, and Corvallis, and included two department stores, two chain stores, two mail-order retail stores, and three specialty shoe shops.

The customers were observed while the investigator was seated in the store as though buying shoes herself. The data recorded for each customer included the specifications given by the customer to the

salesman; the number of pairs of shoes considered by the customer; the type, purpose, material, heel height, color, and price of each pair; the total length of time necessary to come to a decision; if purchase was made, the purchase price; and if not purchased, the reasons given for failure to purchase.

Of the 300 customers observed, 187 purchased shoes after considering 801 pairs. The type of shoe most frequently purchased by the customers in this survey was a black, street oxford in kid or suede with a medium heel. The mean time required for arriving at a decision was 12.2 minutes. In cases where a purchase was made, the time required varied from 7.9 to 20.7 minutes.

Prices of shoes ranged from $1.72 to $8.32 in the various stores. In working up the results of the study, three price classifications were made of shoes. Classed as inexpensive were those whose price ranged from $1.72 to $2.91 a pair; as moderate, those from $4.13 to $4.48; and as expensive, those from $5.78 to $8.32 a pair. Of the shoes purchased, 50 per cent were inexpensive, with a mean price of $2.25 per pair; 18 per cent were moderate, with a mean price of $4.30; and 38 per cent were expensive, with a mean price of $7.47.

There was no apparent definite relation between the length of time required by the customers to arrive at a decision and the price of the shoes.

Customers varied widely in the amount and character of the information they gave the salesman. When more definite information was given as to color, purpose, style, heel height, price, and material desired, the time required to purchase was shortened proportionately.

EDITORIAL

PLANNING FOR HOME ECONOMICS AND FOR PITTSBURGH

"Long-time Planning in Home Economics" is the central theme adopted for the annual meeting which the American Home Economics Association will hold in Pittsburgh from June 28 to July 1. This seems a happy choice, both because it is in line with the soul-searching and the curriculum revision which are so prevalent in home economics circles now and because it is an idea into which the discussions of almost any division or department or committee of the Association can be made to fit without awkward straining.

Certainly it will prove appropriate for the two general meetings. At the Wednesday evening session the speakers are to be the president, Mrs. Burns, and a past president, Miss Zuill. It is hard to imagine that on such an occasion either of them would say anything that did not have some bearing on how to make home economics permanently more effective—and that is hardly more than a paraphrase for long-time planning. So, too, is the announced subject for the general meeting on Friday evening, "Trends in General Education and Their Implications for Home Economics." Well-considered suggestions for long-time planning ought to come from the round-table discussion of this subject led by Dr. Alberty of Ohio State University and participated in by four home economists representing elementary school, secondary school, college, and adult education.

Health education is a topic which must receive attention in any long-time planning for home economics and one which touches the work of almost every home economist, regardless of her special division or department affiliations. It is, therefore, very appropriate that Mary Sweeny, chairman of the committee on home economics in health education, should arrange a special Friday afternoon meeting to consider its implications.

It may be stretching the point a bit, but not too far, to say that proper interpretation of home economics to the public is essential in any program for strengthening home economics, long-time or short-time. It is not inappropriate that this year for the first time the publicity for the annual meeting is to be in charge of a professional publicity woman. The annual meeting of almost any professional organization offers an admirable opportunity to tell the public about its aims and achievements. In the past, the American Home Economics Association has not begun to make the most of this opportunity. It hopes that with the help of an experienced publicity director it will be able better to utilize the news value of the Pittsburgh meetings. Her experience and knowledge of press procedures, the help she will have from the local committee, and the co-operation of chairmen of meetings and committees should together give wider and more effective publicity to what home economists are doing and what home economics stands for.

To the home economist herself no amount of newspaper articles and no proceedings and reports, however full, can take the place of being at the meetings in person. Pittsburgh is not far from the center of home economics population, and one need not go far off the direct line to or from it to find good places for a summer holiday or a sum-

mer school. Miss Brown's article on page 171 suggests some professionally and generally interesting places to visit in the state. As a closing word to the wise, we say that information on such practical points as railway and hotel rates has already been sent to Association members or may be obtained from headquarters at 620 Mills Building, Washington, D. C.

CHILD LABOR LEGISLATION

Progress in legislation is not easy to report in a monthly magazine because the situation often changes entirely while the copy is at the printer's. As this is written, it is still impossible to foresee what may happen in Congress along the lines of child labor legislation, but before it reaches its readers something of decided importance may have occurred. Perhaps the most helpful thing to do is to give a brief résumé of the situation at the beginning of 1938, borrowing heavily from the new pamphlet "Child Labor Facts, 1938" issued by the National Child Labor Committee, 419 Fourth Avenue, New York City.

The present situation will seem less confusing if we recall that two federal laws intended to control child labor have already been passed and declared unconstitutional. In 1924, two years after the second was declared unconstitutional, Congress passed a resolution for a constitutional amendment which would give it power to "limit, regulate, and prohibit the labor of persons under eighteen years of age." The further history of the amendment is thus summarized:

> When this Amendment was brought before the states for ratification a tremendous campaign of opposition was launched, the chief antagonists being the National Association of Manufacturers and the southern textile industry. In the face of their well-financed opposition only four states ratified in 1924–25. From that time until 1933 interest was at a low ebb, only two additional states taking favorable action.
>
> The onslaught of the depression, however, turned the attention of employers and labor alike to the wasteful practices in American industry. The spectacle of children working while adults were in the bread lines revived interest in the Federal Child Labor Amendment. Fourteen additional states ratified in 1933.
>
> This success brought a renewal of the campaign of opposition and in January, 1934 came the announcement of a National Committee for the Protection of Child, Family, School and Church, organized by the Sentinels of the Republic for the express purpose of defeating the Child Labor Amendment. This committee has flooded the country with literature misrepresenting the Amendment, corresponded with legislators in states where it was pending, sponsored radio talks, lined up powerful interests against the Amendment, and lobbied in the State Legislatures. Another strong opponent of the Amendment is the American Newspaper Publishers' Association which fears the Amendment may be a threat to the newsboy system.
>
> As a result of this powerful opposition, and despite the example of successful federal regulation through the child labor provisions of the codes, the Amendment met a temporary setback and during 1934–37 only eight additional states ratified. Ratification by eight more states is necessary before the Amendment becomes part of the Constitution. A vigorous campaign to secure these ratifications is now being conducted, strongly supported by public opinion. A nationwide poll conducted by the American Institute of Public Opinion in the spring of 1937 showed a majority for the Amendment in every state of the Union. For the country as a whole 76 per cent voted for ratification.

Meanwhile, individual states have passed laws covering various phases of child labor, such as minimum age for entering employment, length of working day, physical and educational qualifications for going to work, and many others. The present status of the main points is summarized in "Child Labor Facts," which also reminds us that,

> Federal legislation, if enacted, will bring industries engaged in interstate commerce under federal standards. In any state, however, where higher standards are established by law, the latter will prevail. Vast areas of child labor not touched by federal law will remain subject to the provisions of the individual state laws.

As regards pending federal legislation, the pamphlet says:

> During the regular session of Congress in 1937 over fifty bills affecting child labor were introduced. The Wheeler-Johnson bill, based primarily on the prison-made goods method of regulating child labor, passed the Senate but was not acted upon by the House. The Black-Connery Fair Labor Standards bill (popularly known as the Wages and Hours bill) which contained child labor provisions passed the Senate but did not come to a vote in the House in either the regular or special session. Another attempt to secure federal legislation on child labor, based on the interstate commerce power, will be made in the 1938 session.
>
> Federal legislation based on the interstate commerce power will not mean any slackening of effort for ratification of the Child Labor Amendment. At best such legislation can reach only 25 per cent of the working children. It will not cover those employed in mercantile establishments, offices, or personal service industries, such as hotels, restaurants, garages, etc. Nor will it give protection to children engaged in large-scale commercialized agriculture and in street trades. Only an amendment to the Constitution, giving Congress the indubitable power to legislate on child labor, can completely eliminate the evil.

For years the American Home Economics Association has carried regulation of child labor on its legislative program and has urged affiliated state associations to secure the passage of the Child Labor Amendment by their state legislatures. It also hopes that they will be active in promoting state laws of similar purpose. The Washington members of the legislative committee are watching developments in Congress, and they count on state associations and individual members to be ready to go into action if and when their help is needed for measures in line with the Association's legislative program.

BETTER CARE FOR MOTHERS AND BABIES

Half a hundred organizations interested in maternal and infant welfare were invited by Miss Katharine F. Lenroot, chief of the United States Children's Bureau, to attend a conference in Washington on January 18 and 19. The American Home Economics Association was among them and was officially represented by the president, Mrs. Burns; the executive secretary, Mrs. Ansley; Dr. Flora Rose of Cornell; and Helen Stacey of New York. Four or five hundred persons were present. The purpose of the meetings was thus stated on the official program:

> The Conference on Better Care for Mothers and Babies has been called to consider the existing resources for the care of mothers and newborn infants in the United States, the extent to which maternal and infant mortality may be reduced, the measures successfully undertaken in certain localities and among certain groups, and the ways by which such services may be made everywhere available.

In general, the conference considered conditions and problems which the Bureau faces in its new work under the Social Security Act. Besides hearing addresses by specialists who described the present unsatisfactory conditions, the conference through special committees considered what could be done to utilize more efficiently our economic, professional, and community resources. A findings committee summarized the discussions and prepared recommendations for the consideration of the conference. This one, which originated with the committee on resources of citizens' groups, more or less epitomizes the action taken:

> The Committee on Resources of Citizens' Groups recommends that this Conference make provision for a continuing committee, the chairman of this committee to be appointed by the chairman of the Conference and the chairman of the Conference planning committee. It is the hope of the Conference that each organization represented in the Conference will appoint a member to serve on this continuing committee.
>
> The function of this committee would be to give clearing service for the participating organizations, to provide the organizations with material for study, and to assist in the effort to increase public

interest in better care for mothers and babies. It may also consider the legislation which may be deemed necessary to advance this work, and when such legislation has been prepared, provide a means through which organizations endorsing the legislation may act in supporting the measure.

The report of the conference was presented to President Roosevelt and discussed with him by Miss Lenroot and six members of the findings committee, including the chairman, Dr. Fred L. Adair of Chicago.

The best summing up of the conference which we have seen is this one from *Better Times*:

The 500 delegates who attended the conference were unanimous in their decision that to provide the medical care essential to prevent needless deaths of mothers and infants, more and better measures must be taken through national and state agencies to increase the number of qualified physicians, especially in rural areas, and to pay them for professional services which they could not otherwise render. Some 150,000 deaths of mothers or infants still occur annually among the 2,000,000 families in this country in which a birth takes place each year, figures used at the conference show.

THE BORDEN AWARD

Last June the JOURNAL reported that the Borden Company, large milk distributors in and near New York City, was offering five annual awards of $1,000 each for meritorious research on milk and milk products, and had asked the American Home Economics Association to serve as one of several scientific organizations to make one award each year, the recipient to be a member of the Association who had done valuable research work in the field of applied nutrition. To set up the conditions of the award, the executive committee of the Association appointed a committee, with Dr. Julia Outhouse of the University of Illinois as chairman. In its first report, which was adopted at Kansas City and the gist of which will be found on page 698 of the December JOURNAL, the committee recommended that it have until December 31 to make the award for 1937, that the choice for that award be based on material published during the five years ending January 1, 1936, and that the 1938 award be announced at the 1938 meeting of the Association and be based on material published since January 1, 1936.

It is a pleasure to announce that the committee unanimously chose Dr. Amy L. Daniels of the Iowa Child Welfare Research Station as the recipient of the 1937 award. The committee report says:

The paper "Relation of the Ingestion of Milk to Calcium Metabolism in Children" by A. L. Daniels, M. K. Hutton, E. Knott, G. Everson, and O. Wright (*American Journal of Diseases of Children*, Vol. 47, 1934, pp. 499–512) was considered to qualify more fully for the award than did any other paper published during the past five years.

In recommending Dr. Daniels for this award, the committee recognizes that this research does not settle the question of the milk requirements of children, but does provide a sound basis for the more exact standards of the calcium requirements which are undoubtedly best met by milk. The committee wishes to emphasize that, because of the implications concerning the effect of previous stores on calcium retentions, this research points to a new method of approach for future studies on human food requirements. Furthermore, the committee believes that Dr. Daniels' researches over a period of years have made an outstanding practical contribution to human nutrition.

The committee has requested that the wording on the medal be as follows: "Award for outstanding achievement in applied nutrition research, to Amy L. Daniels, 1937, by direction of American Home Economics Association."

Dr. Daniels is a biochemist who for the last twenty years has been doing distinguished and stimulating work in child nutrition at the Child Welfare Research Station in Iowa City. Younger home economists may not realize that before she went there she was a professor of nutrition at the universities of Missouri and Wisconsin and that earlier still she taught home economics in high schools in her native New

England and in Denver, Colorado. In fact, she was the second of the home economics teachers who introduced the work into the Denver schools. Wherever she has been, she is affectionately remembered for her warm friendliness and her wide-ranging, racy talk as well as for her unquestioned professional achievements.

TRIVIA FOR BOOKLOVERS

This editorial has no justification for appearing in a professional home economics magazine, nor will there be any attempt to rationalize or apologize for it. It is printed simply and solely because we have enjoyed one or two trifles met in our own desultory reading about books and want to share the fun with somebody, and because we cherish the fond hope that JOURNAL readers include at least a few who are booklovers as well as home economists.

The first bit was found in a note from the Macmillan Company about a posthumous volume of Sara Teasdale's poetry. It said that her literary executors are in possession of a little notebook in which she put down the names of all the books she read from the time she was fifteen—with an asterisk for each time she reread a book. Don't we all wish we'd done that? Think what pleasant—and boresome—reminders it would give, and perhaps some surprising explanations for certain of our present opinions.

The other refreshing breath came with the "Trade Winds" that blow across the last page of the *Saturday Review of Literature*. On January 22, Old Q. enjoyed himself talking about book catalogs, from which he claims to eke "most of our we hope gradually widening education." According to him, "People who have not learned the joy of booksellers' catalogues are mere beginners, librolescents." Such being his sentiments, no wonder he worked out the chance to tell this:

> We rediscovered in an old scrapbook a letter from Mr. E. W. Heffer of the famous Heffer and Sons' bookshop in Cambridge, England. Fifteen years ago he sent us his catalogue and wrote, what some bookseller might well reprint:
>
> "We hope that you will look through it and mentally decide upon which books you wish to buy from it, knowing perfectly well that you never intend to do so; for this is the joy of all true catalogue reading. It is a perfectly legitimate form of drug-taking. It is a very healthy way of getting intoxicated, because you can sit up past the regulation hours—past the hours when those in authority have decided it is time for you to go to bed—and yet mount the stairs with steady tread, despite the shaky feeling in the brain, knowing the joy of having adventured something big which involved nothing more than a wish."

Incidentally, we took Old Q.'s advice and sent for one of the catalogs mentioned. Its effect on our beauty sleep was what Mr. Heffer describes, but to our surprise we found in it something for an entirely justifiable editorial. But that case of serendipity must wait "To be continued."

MARY HINMAN ABEL

Too late for more than the briefest mention in this issue, came word of the death on January 13 of Mrs. Mary Hinman Abel at her home near Baltimore. She had been in failing health for several years so that sadness at her passing is qualified by a sense of release. Her going leaves a large gap in the lessening ranks of those who founded the American Home Economics Association and its JOURNAL. A little later the JOURNAL will try to pay more adequate tribute to its first regular editor. She set for it the standards which won the respect of the scientific and educational world and on which, in so far as her successors have been able to maintain them, its reputation still rests.

RESEARCH

VITAMIN C CONTENT OF HOME-CANNED TOMATO JUICE[1]

HAZEL M. HAUCK

New York State College of Home Economics, Cornell University, Ithaca

THIS study was undertaken to answer the requests from homemakers for information as to whether vitamin C is well conserved in home-canned tomato juice. When the study was begun, the juice of either home-canned (1) or commercially canned tomatoes (2) was known to be antiscorbutic. It had been shown also that commercially canned tomato juice might be a good source of vitamin C (3) and that, under suitable conditions, loss of vitamin C potency during canning could be almost entirely prevented (4). Conditions which can be obtained in commercial practice, such as extracting the juice in an atmosphere of steam and vacuum packing, are not easily obtained in home practice; hence, some investigation of the vitamin C content of home-canned tomato juice seemed desirable. Since this investigation was begun, Fellers *et al.* have reported on the antiscorbutic value of laboratory-prepared tomato juice extracted by a cyclone pulper (5), a method not commonly used in the home.

Daniel and Rutherford have determined the ascorbic acid content of home-canned tomatoes by titration with 2–6 dichlorophenol indophenol (6). They compared the ascorbic acid content of fresh juice with that of tomatoes and tomato juice which had been canned in glass or in tin and tested 24 hours after canning and again after 6 months. Some of the glass jars were wrapped in photographic black paper to exclude light, while others were left unwrapped.

In this laboratory during the seasons of 1934 and 1935, tomatoes were canned in glass, using six different methods. The unpublished data show that the vitamin C content of these samples of tomato juice, as judged by the titration values, varied considerably, but the variations could not be correlated with the method of extraction or processing. Most of the samples had a lower vitamin C content than a commercial tomato juice tested at the same time. This led to the experiments here reported, in which portions of the same lot of tomato juice were canned in glass and in tin. In the light of these experiments and those of Daniel and Rutherford (6), it appears that some then unrecognized variables, such as the exposure to light as influenced by the placement of the jars on the shelf, had sufficient influence to obscure any possible effect of the variation in methods used.

Experimental procedures. Tomatoes of the Marglobe variety, grown at the East Ithaca gardens under the supervision of the department of vegetable crops of Cornell University, were used in these experiments.

[1] The author wishes to acknowledge the voluntary assistance of Linnea C. Dennett, Eleanor B. Schempf, and Hazel Hildebrand in carrying out the preliminary experiments and in the preparation of this report.

The tomatoes were fully ripe and in good condition for canning.

The methods chosen for canning the tomato juice and the tomatoes were such that they could be used with either glass or tin containers.

In preparing the juice, the tomatoes were washed, spots were removed, and the fruit was quartered. The pieces were crushed with a wooden masher, simmered until soft but not mushy, and put through a cone-shaped metal pulp-extractor while hot. One-half teaspoonful of salt was placed in each can or jar. The juice was brought to the boiling point. Part was poured into No. 2 unlined tin cans and part into pint vacuum-seal jars, and processed for 5 minutes in a boiling water bath. The time of processing was counted from the time the water started to boil. The tin cans were sealed before processing and were cooled after processing by plunging into a sink full of cold water.

In canning the tomatoes, the fruit was scalded, peeled, and quartered, heated until the juice boiled, packed in tin or glass, and processed for 5 minutes.

To compare the effects of storage in tin and in glass containers, it seemed well to eliminate the possible effect of light through the glass. Consequently, most of the glass jars of tomato juice as soon as they were cool were placed in the corrugated cardboard carton in which the jars had been purchased; then the carton was sealed and placed on the laboratory shelf beside the tin cans. A few jars of material canned in glass were stored without boxing in glass-doored cupboards where they were exposed to light.

The canned tomato juice and tomatoes were stored for from 8 to 9 months before the titration and feeding tests were carried out.

To obtain some information concerning the effect of holding the juice in the refrigerator after the container had been opened, the juice remaining in a container after removal of that required for the first titration or feeding was placed in a refrigerator and resampled on 4 successive days. The specimens canned in glass were left in the original jars. Those canned in tin were transferred to glass jars and covered. The contents of each jar was mixed before each sampling. This treatment was probably comparable to that in homes, where the practice is to open a large jar of tomato juice and use it for several days.

Vitamin C was estimated by titration with 2–6 dichlorophenol indophenol essentially according to the method of Bessey and King (7). The juice was thoroughly mixed, and 10 cc. portions were placed in 50 cc. centrifuge tubes. Three extractions were made with hot 8 per cent acetic acid (about 20, 10, and 5 cc. portions), and the clear extract was decanted into a 50 cc. volumetric flask and made up to volume. Ten cc. aliquots were titrated against the dye, which was standardized against a fresh solution of synthetic ascorbic acid (Hoffman La Roche). Two 10 cc. samples were taken from each can when it was opened, and one such sample daily thereafter for 4 days. Two or three titrations were made on each sample.

A few estimations were made of total ascorbic acid by treating a portion of the extract with H_2S for from 15 to 20 minutes, allowing the solution to stand for one hour, then sweeping out the H_2S with CO_2. Aliquots were then titrated.

Curative tests on scorbutic guinea pigs were run as a check in some instances, using amounts containing 0.5 to 1 mg. of reduced ascorbic acid, as indicated by the titration.

Results and discussion. Table 1 summarizes the data on the reduced ascorbic acid content of tomato juice and of tomatoes canned from one supply of tomatoes. Each lot of canned tomato juice represents juice extracted at one time, some of which

TABLE 1

Reduced ascorbic acid per cc. of home-canned tomato juice and tomatoes canned in tin and in glass containers and tested freshly opened and after being held in refrigerator for different numbers of days

MATERIAL	CANNED IN TIN					CANNED IN GLASS AND STORED IN THE DARK				
	Freshly opened	Days held in refrigerator				Freshly opened	Days held in refrigerator			
		1	2	3	4		1	2	3	4
	mg.	*mg.*	*mg.*	*mg.*	*mg.*	*mg.*	*mg.*	*mg.*	*mg.*	*mg.*
*Tomato juice**										
Lot A	0.216	0.209	0.199	0.186	0.157	0.107	0.094	0.070	0.035	0.032
Lot B	0.211	0.204	0.203	0.188	0.167	0.100	0.082	0.065	0.048	0.027
Lot C	0.209	0.207	0.192	0.178	0.158	0.101	0.094	0.070	0.054	0.044
Lot D	0.191	0.182	0.165	0.148	0.124	0.088	0.087	0.060	0.049	0.035
Lot E	0.210	0.202	0.195	0.176	0.153	0.095	0.089	0.066	0.048	0.032
Average	0.207	0.201	0.191	0.175	0.152	0.098	0.089	0.066	0.047	0.037
Range of individual samples	0.189 to 0.217	0.170 to 0.216	0.163 to 0.207	0.141 to 0.190	0.109 to 0.176	0.088 to 0.107	0.082 to 0.094	0.060 to 0.070	0.035 to 0.054	0.027 to 0.044
Juice of canned tomatoes										
Sample 1	0.171	0.165	0.160	0.163	0.156	0.080	0.064	0.064	0.062	0.061
Sample 2	0.184	0.176	0.178	0.173	0.173	0.094	0.087	0.077	0.077	0.072
Average	0.178	0.171	0.169	0.168	0.165	0.087	0.076	0.071	0.070	0.067

* Each lot included 3 samples canned in tin and 1 sample canned in glass.

was canned in tin and some in glass. It will be noted that the values were quite similar for the various lots of juice canned in tin, indicating that the tomatoes were fairly uniform in vitamin C content. The values for the lots canned in glass were similar, but only about half as great as the values for the corresponding juice canned in tin. Since the glass jars were stored in the dark, some factor other than light must be responsible for the difference noted. It is apparent also that the values for reduced ascorbic acid decreased more rapidly in the juice canned in glass than in that canned in tin, despite the fact that the latter was transferred to another container before storage in the refrigerator, thus furnishing more opportunity for the introduction of air. This difference is more clearly brought out in table 2, which shows that, whereas the juice canned in tin retained on the average 73 per cent of its reduced ascorbic acid 4 days after opening, that canned in glass retained on the average only 38 per cent.

Similar differences were found in the reduced ascorbic acid content of the juice obtained from tomatoes canned in tin and in glass, as indicated in the data at the bottom of table 1. To extract the juice, the contents of the freshly opened can was put through an ordinary wire strainer. Although the rate of decrease of reduced ascorbic acid is less marked in these juices than in the case of the tomato juice canned as such, it is in the same direction (table 2).

The data in table 3 indicate that most of the ascorbic acid in the freshly opened tomato juice was in the reduced form. This was also true of the juice of canned tomatoes and of tomato juice held in the refrigerator for 4 days, except for the samples of juice that were canned in glass and stored in the dark. This is in accord with the findings of Daniel, Kennedy, and Munsell, who reported good agreement between the titration value for reduced ascorbic acid and the results of guinea pig trials (8). In the present experiments,

TABLE 2

Percentage of reduced ascorbic acid retained in home-canned tomato juice and tomatoes canned in tin and in glass and held in refrigerator for different numbers of days after opening

MATERIAL	CANNED IN TIN				CANNED IN GLASS AND STORED IN THE DARK			
	Held for 1 day	Held for 2 days	Held for 3 days	Held for 4 days	Held for 1 day	Held for 2 days	Held for 3 days	Held for 4 days
	per cent	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*
*Tomato juice**								
Lot A	97	92	86	73	88	65	33	30
Lot B	97	96	89	79	82	65	48	27
Lot C	99	92	85	76	93	69	53	44
Lot D	95	86	76	65	99	68	56	40
Lot E	96	93	84	73	94	70	51	34
Average	97	92	85	73	91	67	48	38
Range of individual samples	90 to 100	86 to 99	75 to 97	57 to 84	82 to 99	65 to 70	33 to 56	30 to 44
Juice of canned tomatoes								
Sample 1	97	94	95	91	80	80	78	76
Sample 2	96	97	94	94	93	82	82	77
Average	96	95	94	93	87	81	80	76

* Each lot included 3 samples canned in tin and 1 sample canned in glass.

scorbutic guinea pigs which received tomato juice in amounts containing 0.5 mg. and 1 mg. of reduced ascorbic acid responded similarly to those fed these amounts of synthetic ascorbic acid. The animals fed tomato juice showed no gross evidences of scurvy after three weeks on the supplement. There were no marked differences in ascorbic acid content of the livers and adrenals of the animals fed 0.5 mg. and 1 mg. of ascorbic acid, but both of these groups had more vitamin C in their livers than the negative controls.

Although almost 90 per cent of the ascorbic acid present in the freshly opened juice canned in glass was in the reduced form, the reduced ascorbic acid decreased much more rapidly than the titration value after reduction with H_2S. The treatment with H_2S was continued for a relatively short time; but since acetic acid was used for extraction in these experiments, the experience of Mack and Tressler (9) suggests that some reducing substance other than ascorbic acid may have been present. Further experiments would be necessary to check this possibility. In any case, the reduced ascorbic acid content is of more interest since the value of dehydroascorbic acid to the body is still in dispute (10).

That exposure to light may in some way be conducive to preservation of vitamin C is suggested by the data from two samples of the same tomato juice canned in glass, one of which was exposed to light and the other stored in the dark. The figures for ascorbic acid found per cc. of tomato juice canned in glass and stored in the dark were: freshly opened, 0.088 mg.; held in refrigerator for 1 day after opening, 0.087 mg.; for 2 days, 0.060 mg.; for 3 days, 0.049 mg.; for 4 days, 0.035 mg. Samples of the same juice canned in glass but exposed to light during storage gave the following figures for ascorbic acid per cc. of juice: freshly opened, 0.158 mg.; held in refrigerator for 1 day after opening, 0.150 mg.; for 2 days,

TABLE 3

Reduced and total ascorbic acid in various samples of home-canned tomato juice and tomatoes freshly opened and after holding in refrigerator for 4 days

DESCRIPTION OF SAMPLE	ASCORBIC ACID IN SAMPLES FRESHLY OPENED			ASCORBIC ACID IN SAMPLES HELD IN REFRIGERATOR FOR 4 DAYS			
	Reduced ascorbic acid per cc.	Total ascorbic acid per cc.	Percentage of total ascorbic acid found in reduced form	Reduced ascorbic acid per cc.	Total ascorbic acid per cc.	Percentage of total ascorbic acid found in reduced form	Percentage of total original ascorbic acid
	mg.	*mg.*		*mg.*	*mg.*		
Tomato juice							
Canned in tin	0.214	0.222	96	0.170	0.197	86	89
	0.214	0.222	96	0.163	0.184	89	83
Average	0.214	0.222	96	0.167	0.191	87	86
Canned in glass and	0.100	0.112	89	0.027	0.083	33	74
stored in the dark	0.101	0.114	89	0.044	0.086	51	75
	0.088	0.097	91	0.035	0.073	48	75
Average	0.096	0.108	89	0.035	0.081	43	75
Juice of canned tomatoes							
Canned in tin	0.171	0.175	98	0.156	0.170	92	97
	0.184	0.188	98	0.173	0.172	101	92
Average	0.178	0.182	98	0.165	0.171	97	94
Canned in glass and	0.080	0.094	85	0.061	0.084	73	89
stored in the dark	0.094	0.107	88	0.072	0.095	76	89
Average	0.087	0.101	86	0.067	0.090	74	89

0.144 mg.; for 3 days, 0.131 mg.; for 4 days, 0.117 mg.

Unpublished values for other lots of tomato juice canned in glass and stored for from 7 to 12 months in cupboards with glass doors were similar to the value above for the sample similarly stored. Daniel and Rutherford (6) noted a similar though less marked difference between jars left exposed to light and those wrapped in photographic black paper. Since in other instances the exposure to light has been shown to hasten the destruction of vitamin C, no explanation can be offered for these results at present.

Since the home canning of tomato juice is increasing and many people in rural districts depend largely upon this as a source of vitamin C during the winter, especially for children, further investigation of factors affecting its vitamin C content would be of interest.

Summary. The observation that home-canned tomato juice may be a good source of vitamin C is confirmed by the study here reported.

Tomato juice canned in tin was found to contain approximately twice as much reduced ascorbic acid as similar juice canned in glass and stored in the dark.

Reduced ascorbic acid, which was the principal form found in freshly opened tomato juice, was more stable in the juice canned in tin than in samples of the same lot of juice canned in glass. Tomato juice canned in tin lost about one fourth of its reduced ascorbic acid when held 4 days in the refrigerator after opening.

REFERENCES

1. CLOW, B., and MARLATT, A. L. Studies of vitamin C in fresh and canned tomatoes. *J. Agr. Research* **40** (1930) pp. 767–775.
2. SHERMAN, H. C., LA MER, B. K., and CAMPBELL, H. L. The quantitative determination of the antiscorbutic vitamin. *J. Am. Chem. Soc.* **44** (1922) pp. 165–172.

3. DAGGS, R. G., and EATON, A. G. Vitamin C content of canned tomato juice. *Ind. & Eng. Chem.* **26** (1934) pp. 292–295.
4. KOHMAN, E. F., EDDY, W. H., and GURIN, C. Z. Vitamins in canned foods. XIII. Canning tomato juice without vitamin C loss. *Ind. & Eng. Chem.* **25** (1933) pp. 682–684.
5. FELLERS, C. R., CLAGUE, J. A., and ISHAM, P. D. Value of commercially canned and laboratory prepared tomato juices as antiscorbutics. J. HOME ECON. **27** (1935) pp. 447–451.
6. DANIEL, E. P., and RUTHERFORD, M. B. Effect of home canning and storage on ascorbic acid content of tomatoes. *Food Research* **1** (1936) pp. 341–347.
7. BESSEY, O. A., and KING, C. G. The distribution of vitamin C in plant and animal tissues and its determination. *J. Biol. Chem.* **103** (1933) pp. 687–698.
8. DANIEL, E. P., KENNEDY, M. H., and MUNSELL, H. E. Relative antiscorbutic values of orange and tomato juices determined chemically and biologically. J. HOME ECON. **28** (1936) pp. 470–474.
9. MACK, G. L., and TRESSLER, D. K. Vitamin C in vegetables. VI. A critical investigation of the Tillmans method for the determination of ascorbic acid. *J. Biol. Chem.* **118** (1937) pp. 735–742.
10. SHERMAN, C. C., and SHERMAN, H. C. The vitamins. *Annual Review of Biochemistry.* Vol. VI. Stanford University, Calif.: Annual Review of Biochemistry, Ltd., 1937, pp. 253–254.

BOOKS AND PERIODICALS

NEW BOOKS

Experimental Food Study. By AGNES FAY MORGAN and IRENE SANBORN HALL. New York: Farrar & Rinehart, Inc., 1938, 414 pp., $3.

"This laboratory text has been prepared specifically for use in the beginning course on foods in the Department of Household Science at the University of California. The subject material includes both the composition of food and its preparation. Unlike most manuals in this field, it is written from the experimental point of view and in no way can be considered as a guide for a course in cookery. The approach made is chiefly that of the chemist and the aim is mainly the illustration of the scientific method by means of experiments and problems dealing with food composition and preparation. Technical knowledge and skill in this field are looked on as desirable by-products."

Modern Dietary Treatment. By MARGERY ABRAHAMS and ELSIE M. WIDDOWSON. Baltimore: William Wood and Company, 1937, 328 pp., $3.25.

The newer knowledge of nutrition and its practical applications in dietetic therapy are made available "for practitioners, nurses and dietitians in a simple and practical way." The first part deals with dietetic principles; the second takes up the diseases requiring dietary treatment and the reasons for choosing certain types of foods; and the third gives examples of and recipes for diets under different conditions. Various tables simplify the planning of accurate yet varied diets. The book is apparently one of the first of the kind to be based on English usage, both writers being connected with London hospitals.

A Primer for Diabetic Patients. By RUSSELL M. WILDER. *Sixth edition.* Philadelphia: W. B. Saunders Company, 1937, 191 pp., $1.75.

An "outline of treatment for diabetes with diet, insulin and protamine zinc insulin, including directions and charts for the use of physicians in planning diet prescriptions," first published in 1921, again revised to bring it into accord with current knowledge and practice. The author is chief of the department of medicine of the Mayo Foundation, University of Minnesota.

English Costume from William I to George IV. By DION CLAYTON CALTHROP. London: A. & C. Black, Ltd., 1937, 463 pp., 8s. 6d.

A revision of a book which has been recognized as standard since its publication in 1906. The text describes the costumes of each reign in connection with prevalent conditions and ideas, and includes many details of dress for both men and women, rich and poor. The sixty-odd colored plates by the author are supplemented by many small pen-and-ink drawings and reproductions of the well-known Hollar drawings of 17th century women's costumes.

Recurring Cycles of Fashion, 1760–1937. By AGNES BROOKS YOUNG. New York: Harper & Brothers, 1937, 216 pp., $3.

The thesis of the book is thus stated in the preface: "The fact that fashions occur in a series of long cycles has been demonstrated by means of research work which has identified a typical fashion in each year during almost two centuries. This typical fashion of any one year combines the features of shape and cut of skirt, of neck line, of sleeves, of waist, and so on, that received most popular acceptance in that year. When all the typical annual fashions were identified, year by year, back to before the time of our Revolutionary War, it

was found that the changes from year to year took place in regular well-defined cycles, and that the cycles repeated themselves in a fixed order at such long intervals that there are only three of them in a century." It deals mainly with women's costumes, though a chapter at the end suggests corresponding cyclical changes in men's clothing. The illustrations, taken from contemporary sources, show typical costumes of the various years. Mrs. Young is the author of *Stage Costuming* (a few pages of which was prepublished in the JOURNAL OF HOME ECONOMICS for April 1933) and a regional director of The Fashion Group.

The Romance of Textiles. By ETHEL LEWIS. New York: The Macmillan Company, 1937, 377 pp., $4.

"The Story of Design in Weaving," told with references to the manners and customs of each period and place, from the days of early Egypt and Assyria to our own and from China and Japan to Peru. Illustrated with forty well-chosen pictures of typical fabrics and provided with a 32-page glossary of weaving terms. The author is a well-known editor, radio speaker, and lecturer on interior decoration who has made a careful study of her subject in the hope of combining accuracy and readability in a single volume.

English Quilting Old & New. By ELIZABETH HAKE. New York: Charles Scribner's Sons, 1937, 54 pp., $2.50.

Besides describing quilting designs and traditions in different parts of England, the author gives a delightful picture of this long-esteemed form of needlework, includes diagrams of designs and working equipment, and reproduces skillfully taken photographs of intricate and beautiful specimens of quilting, old and new.

Embroidery Design and Stitches. By KATHLEEN MANN. London: A. & C. Black, Ltd., 1937, 48 pp., $1.75.

Appliqué Design and Method. By KATHLEEN MANN. London: A. & C. Black, Ltd., 1937, 48 pp., $1.75.

The purpose of these two books is "not to assist students in the copying of work surviving from the past, but to guide them in the production of embroideries which are consistent with the present while remaining within the great tradition of British embroidery," and to urge "spontaneous designing irrespective of drawing ability." Each volume has a colored frontispiece, plates from photographs, and many line drawings of stitches and techniques.

Everyday Things in American Life, 1607–1776. By WILLIAM CHAUNCY LANGDON. New York: Charles Scribner's Sons, 1937, 353 pp., $3.

The author, well-known for his historical pageants, here does for the colonial period of this country much the same thing that the Quennells have done for England in their successful *History of Everyday Things in England;* that is, he brings together in readable form information from original sources on different phases of everyday life. Headings chosen at random from the twenty-one chapters are: "The Fireplace Center of the Home," "Pennsylvania German Farms," "Scotch-Irish in the Mountains," "Eighteenth-Century Furniture," "Measures of Value," "The Provincial Post," "The Colonial Town." The book contains many carefully selected illustrations, a bibliography, and a very full index.

Handicrafts of the Southern Highlands. By ALLEN H. EATON. New York: Russell Sage Foundation, 1937, 370 pp., $3.

This delightful "book on rural arts" includes "an account of the rural handicraft movement in the United States and suggestions for the wider use of handicrafts in adult education and in recreation." It is by the author of *Immigrant Gifts to American Life,* who judges handicraft both "by the product itself and by what the making of it means to the producer." Part I deals with "Mountain Handicrafts of Pioneer Days," Part II with "Revival of the Handicrafts and Their Present-Day Practice," and Part III with "The Rural Handicraft Movement and the Wider Use of Handicrafts." Valuable information about coverlets and vegetable dyes is given in the appendix, and a selected, classified bibliography occupies six pages. The beautifully taken, beautifully reproduced photographs by the late Doris Ulmann range in subject from mountaineer

types and mountain cabins to collections of dulcimers, brooms, hand carvings, feather fans.

Talking Pictures: How They Are Made, How to Appreciate Them. By BARRETT C. KIESLING. Richmond: Johnson Publishing Company, 1937, 332 pp., $1.40.

This book shows the layman the vast extent and intricacy of the motion picture industry by describing in nontechnical terms the steps in making and distributing motion pictures. Included are an interesting glossary of technical and trade terms and pictures of typical Hollywood scenes.

Motion Pictures in Education: A Summary of the Literature. Compiled by EDGAR DALE, FANNIE W. DUNN, CHARLES F. HOBAN, JR., and ETTA SCHNEIDER. New York: The H. W. Wilson Company, 1937, 472 pp., $2.50.

At the request of the committee on motion pictures in education of the American Council on Education, the compilers of this "source book for teachers and administrators" have classified and synthesized digests of significant books and articles under six heads: "The Administration of Visual Aids," "Teaching with the Motion Picture and Other Visual Aids," "Selecting Instructional Materials," "Film Production in Schools," "Experimental Research in Instructional Films," and "Teacher Preparation in Visual Education."

Educational Film Catalog. Compiled by DOROTHY E. COOK and EVA COTTER RAHBEK-SMITH. New York: The H. W. Wilson Company, 1937, 140 pp., $2.

The catalog of classified films to which this is a supplement was originally noted in the JOURNAL for October 1936. It includes 990 nontheatrical films and brings the list up to date as of October 1937. Aside from the technical information and brief descriptions about the films, a few reviews of books on the subject of educational films are included, also a list of films previously listed and withdrawn during 1937.

The Abolition of Poverty. By JAMES FORD and KATHERINE MORROW FORD. New York: The Macmillan Company, 1937, 300 pp., $2.50.

An attempt to survey the causes, effects, and status of poverty, the efforts made to ameliorate them, and the changes in public opinion needed to extend the reforms to the point where poverty would disappear. Among topics covered by the fifteen chapters are: "Overcoming Personal Incapacity," "Family, Home and Neighborhood," "The Redistribution of Wealth," "Unemployment and Conditions of Employment," "Prevention of Major Disasters." The senior author, for many years professor of social ethics at Harvard, will be remembered by home economists as the director of Better Homes in America.

Collected Studies on the Dionne Quintuplets. By W. E. BLATZ, *et al.* Toronto: The University of Toronto Press, 1937, $4.

Published in connection with the conference held at the University of Toronto last October, this volume is unique in that it brings together reports of scientific studies of the biological, mental, social, speech, and self-disciplinary development of the quintuplets and of their routine training up to three years of age. The studies were made by the director and members of the staff of St. George's School for Child Study, University of Toronto, with the active co-operation of Dr. Allan Roy Dafoe.

Educational Experiments in Social Settlements. By GAYNELL HAWKINS. New York: American Association for Adult Education, 1937, 145 pp., $1.

Another volume in the series noted on page 50 of the January JOURNAL.

Christianity and Sex. By RICHARD C. CABOT. New York: The Macmillan Company, 1937, 78 pp., $1.

The author of *What Men Live By* and the more recent *Layman's Handbook of Medicine* (noted on page 336 of the JOURNAL for May 1937) here develops his philosophy regarding training for desirable conduct in matters of sex. Combining his long experience as a physician and social worker with his sincere belief in the validity of Christian ethics, he maintains that the surest approach to social morality is

through the consecration of the affections and that spiritual ideals are more efficacious than biological and statistical facts.

Alcohol: One Man's Meat—. By EDWARD A. STRECKER and FRANCIS T. CHAMBERS, JR. New York: The Macmillan Company, 1938, 230 pp., $2.50.

Based primarily on the authors' experience in psychiatric practice, this book considers alcoholism as the result of attempted escapes from problems which demand more emotional maturity than the patient or victim can bring to bear on the situation, and holds that cure depends on re-educating him to recognize this fact and to seek other solutions to his difficulties. Case histories are cited to show the psychology of alcoholism and its effects on personality and physique, and methods of treatment practiced by the authors are described and illustrated.

Living Safely. By EARLE C. BOWMAN and PAUL F. BOSTON. New York: The Macmillan Company, 1938, 178 pp., $0.52.

This school textbook is intended to provide information about "safety in the home, in the school, on the farm, on the playground, and on the highway, with chapters on fire-prevention, first aid, motor vehicles, and health and disease. It is written with a view to awakening the will to safety and with the aim of encouraging a positive attitude toward safety on a social obligation." The material is arranged for 88 lessons and in "a logical order that provides effective motivation." The first 11 lessons deal with safety in the home.

The Diary of a Housing Manager. By ABRAHAM GOLDFELD. Chicago: National Association of Housing Officials, 1938, 115 pp., $1.

Because of the lack of information regarding the management of large-scale apartment or low-rent house projects in this country, the N.A.H.O. persuaded the successful manager of the Lavanburg Homes on the lower east side of New York to edit his diary so that it could serve as a source book for workers, students, and teachers of housing management. The diary proper covers the years from 1927 to 1930. It is preceded by a brief description of the beginnings of the Lavanburg Homes and followed by a summary of activities from 1931 to 1937. The whole gives a vivid picture of the functions and problems of the manager in such a project.

Household Mechanics: Industrial Arts for the General Shop. By EARL L. BEDELL and ERNEST G. GARDNER. Scranton, Penna.: International Textbook Company, 1937, 130 pp., $1.25.

Although intended for boys in industrial arts courses, some of the information and problems in this manual dovetail with the work of girls in home economics classes.

Gardening Indoors. By F. F. ROCKWELL and ESTHER C. GRAYSON. New York: The Macmillan Company, 1938, 201 pp., $2.50.

Instigated by the revival of interest in growing plants indoors, the authors describe the various types of indoor gardens, not only window gardens but also terrariums, open-dish gardens, and underwater gardens, and give much sensible advice about how to start and manage them and about what there is to grow in them. The photographs, mainly by Jessie Tarbox Beals, are both beautiful and practically helpful. Mr. Rockwell is garden editor of the *New York Times* and the author of many gardening books.

University Debaters' Annual. Edited by EDITH M. PHELPS and JULIA E. JOHNSEN. New York: The H. W. Wilson Company, 1937, 533 pp., $2.25.

"Constructive and rebuttal speeches delivered in debates of American colleges and universities during the college year 1936–1937" on eleven subjects, with a bibliography for each. Among the titles are: "Government Ownership of Electric Utilities," "Teachers' Oaths of Allegiance," "Consumers' Cooperatives," "The Present Day Family as a Social Institution."

ABSTRACTS

CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS

Fate of children infected with tuberculosis during the first five years of life, H. A. Rosenberg. *Am. J. Diseases Children* **54,** No. 1 (July 1937) pp. 15–23.

The rate of death from tuberculosis among 348 children infected during the first five years of life and observed from 1 to 9 years was 9.1 per cent. Among 175 children infected during the first year of life, the death rate was 14.8 per cent; 59 infants infected during the period from 12 to 18 months of age showed a rate of 10.2 per cent. Children infected during the first 3 months of life gave the highest rate, 43.7 per cent. In a group of 114 children infected after the age of 18 months, no deaths resulted. The mortality rate from tuberculosis among negro children was found to be double that for white children. Children with parenchymal lesions of the lungs, discovered by roentgenograms, gave a mortality rate five times that of children presenting evidence of enlarged tracheabronchial glands and eight times that of those showing no X-ray evidence of tuberculosis. Such figures are evidence of the improving ability of the medical profession to discover cases of this disease before they become too serious.

Adjustment scores of adolescents having a history of frequent illness during childhood, M. C. Hardy. *Am. J. Orthopsychiat.* **7,** No. 2 (April 1937) pp. 204–209.

Among normal white children the experience of frequent illness during childhood was not found to be a serious handicap to personality development but tended to stimulate the growth of wholesome attitudes toward the realities of life.

A study of children's reactions to failure and an experimental attempt to modify them, M. E. Keister and R. Updegraph. *Child Development* **8,** No. 3 (Sept. 1937) pp. 241–248.

In an attempt to discover what responses preschool children give when faced with failure, a study was made of 82 children of superior intelligence in two different problem situations. Certain criteria were set up for distinguishing between desirable and undesirable modes of behavior, which became the basis of selection of a group of children who were later exposed to a training period to reconstruct attitudes toward failure. Children who showed mature responses to the problem situations showed such types of behavior as "attempts to solve alone" and "interest," while those with immature behavior showed a tendency to "ask for help," "whine," or to "make no overt attempt." Behavior during the training period gradually improved in such ways as by trying longer, evincing more interest in the problems, and the elimination of emotional behavior. That changed behavior and attitudes result from a training period in a given situation should be of interest to teachers and psychologists.

The sequential patterning of prone progression in the human infant, L. B. Ames. *Genetic Psychol. Monographs* **19,** No. 4 (Nov. 1937) pp. 413–460.

Five infants were photographed at the Yale clinic at regular intervals of 4 weeks, starting at 24 weeks of age and continuing through the 56th week. Additional records describing behavior during one day each month supplemented the motion pictures. The results of the study show that prone progression may be classified in 14 stages, beginning with the "knee and thigh forward beside body" at 28 weeks to "quadrapedal progression" at 49 weeks. Fifteen babies from outside the clinic provided supplementary material for comparisons. Individual differences were apparent in the ages at which the stages appeared, the tempo of movements, and the degree of elaboration of the individual stages. Most of the subjects showed contralateral dominance; that is, if the right hand was dominant, the left side was dominant in the use of the legs. Practice did not operate to reduce the speed of any particular pattern. The author concludes that prone progression follows the general laws of growth and that maturation is more potent

than extrinsic factors. The trend evident in all 20 subjects was for prone development to proceed in cephalocaudal direction, the use of the arms preceding the development and use of the legs.

Empirically determined grade norms as a factor in the educational maladjustment of the "average" child. Part II. The age-grade status of children of 90 to 109 I.Q., Z. MAIN and E. A. HORN. *J. Educ. Research* **31**, No. 3 (Nov. 1937) pp. 161–171.

Analysis of the increasing proportion of overage pupils of 90 to 109 I.Q. indicates that "age for grade" is a measure which has come to us through tradition and the operation of compulsory education laws. Progress data were studied for 414 junior high school children in all six grades; for 241 children in the fourth, fifth, and sixth grades whose I.Q.'s ranged from 90 to 109; and for 211 children in the fourth, fifth, and sixth grades who showed superior intelligence. The proportion of pupils of normal age for their grade was found to decrease with each term, and that of overage pupils among the junior high school group increased. In the younger "average" group, 36 per cent were at the normal age for their grade, as against 76 per cent of the "superior" group. An increasing proportion of the average children were found to be 1, 2, 3, and even 4 terms overage, which suggests that the norms of achievement for each grade are too high. Standards which allow the average child to complete each grade without failure are recommended.

Aspects of home environment in relation to behavior at the elementary school age, M. C. HARDY. *J. Juvenile Research* **21**, No. 4 (Oct. 1937) pp. 206–224.

A 4-year study on 194 girls and 215 boys from 395 families was undertaken to determine what aspects of the home contributed directly to the behavior of elementary school children. Each child was rated by his teachers on general classroom behavior, attitudes, and general behavior toward others. Further information and records were obtained from the children and parents; also, semiannual interviews were held by the school psychologist. Aspects of the home unrelated to child behavior were found to be: the presence of stepparents or adult relatives; foreign-born parents; participation of parents in community organizations; educational background of the parents; incidence of nervous and mental disorders in the family; and extent and duration of breast feeding. Aspects related to child behavior were: health status of parents; disparity in age of parents; size of the family unit; order of birth; and sex of nearest-age siblings. The author sees no evidence of close relationship between the operating factors of socio-economic status and the degree of adjustment to co-operative social activities.

Prepare them for marriage, R. E. DICKERSON. *Parents' Mag.* **12**, No. 12 (Dec. 1937) pp. 24–25 +.

Preparation for marriage should not be set apart from the experiences of everyday living or considered unessential until the individual reaches adolescence or later. Rather, preparation should be a continuous process from birth and should take the form of training for emotional maturity and the proper attitude toward sex. Establishing the home and family is fundamental to the prevalent social order. The harmonious family and happy home imply mature behavior on the part of the adults and training the children for fuller self-realization. Education for marriage must include instruction in the psychology of intimacy and the psychological results of physical and emotional sex gratifications both before and after marriage. Parents themselves are responsible for the attitudes youths acquire toward the opposite sex, particularly in the puppy-love stage. Teasing may seriously impair and interfere with a wholesome emotional growth and natural interest in the boy-girl relationships. If the puppy-love stage is dealt with wisely, valuable lessons may be learned from it. If parents encourage children to have friends of both sexes from young childhood on, many of the so-called adolescent sex problems may be avoided; unwholesome attitudes replaced by wholesome feelings of respect for the opposite sex; and sound standards set for sex conduct and married life.

M.E.M.M.

CONSUMER PROBLEMS

The consumer movement today, R. I. ELLIOTT. *Advertising & Selling* **30,** No. 2 (Nov. 18, 1937) pp. 29–30+.

This article lists the consumer services rendered by Consumers' Research, Consumers' Union, Cooperative Distributors, Inter-Mountain Consumers' Service, and the consumer educational programs of 6 governmental agencies and 26 women's organizations. [Erroneously included is the Women's Joint Congressional Committee, which does not itself act on legislative measures but merely provides machinery for joint action by such of its member organizations as may be working for a given measure.] The use of films as the latest and most effective innovation for spreading consumer information is described. Business is advised to heed the trend and furnish the desired information.

A square deal for milk, C. E. NORTH. *Advertising & Selling* **30,** No. 4 (Dec. 16, 1937) pp. 31, 44.

Discussing the proposals being brought forward in New York City for putting milk in the hands of public utilities, the author urges that a thorough survey be made first in order to promote a better understanding of the reasons for the spread between price to producer and cost to consumer.

What do you know about furs? M. DANA. *Atlantic Mthly.* **160,** No. 5 (Nov. 1937) pp. 608–611.

A guide to wise purchase of furs, including points to look for in the most used varieties and concluding with a table of approximate durability.

An irresistible force knocks at the gates of business, H. W. BRIGHTMAN. *Bull. Natl. Retail Dry Goods Assocn.* **19,** No. 11 (Nov. 1937) p. 12.

The significance of the recent Federal Trade Commission rules concerning rayon should be recognized by retailers and manufacturers as only a start. The Consumer-Retailer Relations Council has realized that consumer demands were more than a passing fad, that government support was being enlisted in their favor, and that now business must find ways to meet them.

Retailers present their position on rayon regulations to F. T. C. *Bull. Natl. Retail Dry Goods Assocn.* **19,** No. 11 (Nov. 1937) pp. 13, 54.

A report of the conference of the National Retail Dry Goods Association with a representative of the Federal Trade Commission for the purpose of discussing the new rayon regulations. The willingness of the Association to co-operate was made clear, but certain difficulties were brought out. Informative labeling by the manufacturers was presented as a desirable alternative to sales-check descriptions. More time for disposal of unlabeled goods on hand was asked for.

Two consumers look at sales training, H. KIRK and L. A. HEUER. *Bull. Natl. Retail Dry Goods Assocn.* **19,** No. 11 (Nov. 1937) pp. 17–18+.

These two writers agree that adequate labeling is a great help to good salesmanship. In the absence of informative labeling, salespeople should be trained to recognize and emphasize the best values in the merchandise handled and to interpret customers' wants.

Price fixing doesn't stop cutters, *Bus. Week,* No. 430 (Nov. 27, 1937) pp. 18–20.

Price-fixing authorized by state fair trade laws and found constitutional by the Supreme Court is upheld, with exceptions, in the sale of drugs, but is not upheld for liquors, radios, and typewriters. Trade-in allowance is the tool used for drastic price-cutting in the last two items.

Vitamin ads under fire, *Bus. Week,* No. 430 (Nov. 27, 1937) pp. 49–50.

A review of recent releases from the Federal Trade Commission publicizing stipulations of soap and cosmetic manufacturers who have agreed to renounce misleading claims for vitamin D in their products. A résumé of the therapeutic uses of the vitamins is included.

When you buy coal. *Consumers' Guide* **4,** No. 18 (Nov. 29, 1937) pp. 7–11, 19.

Distinguishes between high- and low-volatile coals, analyzing each in terms of heat and waste. Several grades and sizes of anthracite, semibituminous, and bituminous coal, as well as coke, are described, with their advantages and disadvantages under specified conditions, and their comparative costs per Btu. Precautions necessary for assuring full weight and other factors in fuel economy are discussed.

Advertising and the consumer movement. Crowell Publishing Company (Nov. 1, 1937) 25 pp.

Recognizing a conflict between the opinions of some consumer readers and the interests of advertisers, the Crowell Publishing Company has made a study of the "forces influencing consumer education." These are listed as: (1) 4 "professional consumer groups" of the Consumers' Research type; (2) 3 "educational" groups—the American Home Economics Association, the American Association of University Women, and the National League of Women Voters; (3) 14 women's organizations which are influenced by the groups previously mentioned and which jointly represent a membership of more than five million women "exposed to the consumer educational material described"; (4) 7 government agencies described as dedicated to consumer education, together with an outline of the place which they hope consumer interests may occupy in the expected reorganization of federal government departments; (5) public libraries and their circulation of consumer literature, together with facts revealed by questionnaires regarding the wide and increasing circulation of books of the *100,000,000 Guinea Pigs* type; (6) consumer education in the schools and colleges, with a synopsis of the first 291 replies to a questionnaire mailed to 2,000 teachers which indicated that 95.2 per cent of high school home economics teachers dealt with the subject of consumer buying in their classwork; (7) 7 "miscellaneous" organizations, including the Consumer-Retailer Relations Council, the National Better Business Bureau, the Household Finance Corporation, and various "shopping guides." As a result of the study, the Crowell Publishing Company feels that the rapid growth of the consumer movement has resulted in an unjust prejudice against all advertising and most branded products. Of the influence of the women's organizations referred to it says, "The women's organizations here mentioned include many of the most intelligent women leaders of American thought. They are studying this new science of the consumer, in some cases with the enthusiasm of a crusade. But in addition to being consumers, they are, like all of us in America, a part of the industrial fabric of the country. They must, therefore, be receptive to the story that industry has to tell about what American business is doing for the consumer." The Crowell Publishing Company has established a Consumer Division, under the direction of Anna Steese Richardson, to act as a clearinghouse "through which American business can tell a clear story of what it is doing to provide ever better products and services to its consumers."

Advertising ports and portents, W. B. DONHAM. *Domestic Commerce* **20,** No. 16 (Dec. 11, 1937) p. 310.

Deplores the appeal to fear common to much present-day advertising material. Even though such methods do, in fact, sell goods, the widespread fear engendered is a source of danger to all business.

Label or babel? K. FISHER. *Good Housekeeping* **106,** No. 1 (Jan. 1938) pp. 82–83+.

Asks for more factual information on labels, particularly those dealing with fabrics. Also urges that manufacturers' labels be not removed by retailers.

Laboratories form an association. *Ind. Stand.* **8,** No. 12 (Dec. 1937) p. 345.

Twenty commercial testing laboratories have formed an organization, the American Council of Commercial Laboratories, for the purpose of promoting the proper use of scientific testing methods "for the protection and certification of quality in advertised goods."

Death by the pint, J. D. RATCLIFF. *McCall's* **65,** No. 4 (Jan. 1938) pp. 18–19.

Concise story of sulfanilamide, its unfor-

tunate combination with a deadly chemical, and the lack of proper protective legislation. [Significant features of this short article are the effectiveness of the writing and its conspicuous placing in the fiction pages of the magazine.]

How to get meat grading. *Natl. Consumer News* **5,** No. 3 (Dec. 1937) pp. 13–14.

The nature of government grading of meat and its value to the consumer are explained and a seven-point program for consumer groups interested in securing it for their communities is suggested.

Business moves rapidly toward better labeling. *Natl. Consumer News* **5,** No. 3 (Dec. 1937) pp. 19–20.

The month of November 1937 probably showed a greater advance in the cause of informative labeling than any similar period in business history. Outstanding steps were: (1) promulgation of new trade practice rules for the rayon industry and, in general, the enthusiastic acceptance of these by manufacturers; (2) progress in the movement by individual stores to give consumers facts.

Parents' Mag. **13,** No. 1 (Jan. 1938) pp. 29–31.

Advertisements of a generation back are reproduced in this special "When Mother Was a Girl" number and show the contrast between then and now.

Much advertising "regulation" in prospect; 60 bills now before Congress, G. S. McMillan. *Printers' Ink* **181,** No. 11 (Dec. 16, 1937) pp. 11–13+.

After pointing out that the bills affecting selling and advertising which are introduced in Congress may indicate an important future trend, even though defeated for the time being, the author outlines some sixty measures to be brought up in the present session. Some of these deal with false advertising, with the licensing of all corporations doing interstate business, and with the possible amending of the Federal Trade Commission Act. Others have to do with the barring of testimonials from broadcasting, the taxation of broadcasting stations, and amendments to the trademark and copyright laws. Truth-in-fabrics is the subject of at least four bills and liquor of three. Imported goods, anti-trust laws, and further food, drug, and cosmetic legislation are mentioned, as well as many miscellaneous items.

Odd-shaped packages, D. Gridley. *Printers' Ink* **181,** No. 13 (Dec. 30, 1937) pp. 20–21+.

The nonsymmetrical, unusual shaped containers should not be sweepingly condemned or endorsed. The unusual shape is justified when it has real value such as greater utility and convenience as a household container or when it is used for novelties or for other products which adapt themselves to odd shapes. These advantages are often outweighed by such disadvantages as extra trouble of handling, greater expense in packing for transportation, difficulties in displaying, and higher percentage of breakage. Odd shapes are frequently detrimental to an impression of quality, since they suggest cheapness and become tiresome. Standard shapes and sizes, using striking labels and closures to get attention, appear to be more practicable.

"Free" in advertising. *Printers' Ink* **181,** No. 13 (Dec. 30, 1937) pp. 22–23.

The Federal Trade Commission through a series of court decisions has defined the word "free" when used as a selling device, to mean genuinely free or as defined in the dictionary. One of two articles offered at a combination price can no longer be designated "free" when that price is even a penny higher than the price of either article sold separately.

Services of the National Bureau of Standards to the consumer, compiled by R. A. Martino. U. S. Dept. Commerce, 1937, 27 pp.

An outline of the Bureau's activities. The section on textiles, pages 20–22, gives a list of publications on textiles of interest to the consumer.

R. A. H.

EDUCATION

Contributed by the Home Economics Education Service, United States Office of Education

GENERAL

Planning a program of evaluation, H. B. Wood. *Curriculum J.* **8,** No. 8 (Dec. 1937) pp. 355–359.

Six principles for planning a program of evaluation in relation to the total educational program are given, together with the major steps which should be kept in mind in a school or city-wide evaluation program.—B. I. C.

The future of our country. *J. Natl. Educ. Assocn.* 27, No. 1 (Jan. 1938) pp. 8–19.

In 1931 the National Education Association created the Committee on Social-Economic Goals in America. The second report, issued in 1937, is entitled "Implications of Social-Economic Goals for Education" and presents these goals in brief form for the use of teachers in high schools, colleges, and adult groups.—R. V. H.

A guide for exploratory work in the Kansas program for improvement of instruction. Kans. State Dept. Educ. Bull. No. 3 (Oct. 1937) 388 pp.

The guide for the second year's work in the state program for improving instruction contains statements of aims of education, a plan for scope and sequence and organization of instruction, and materials in several areas of social life, with suggestions for adapting them for use at different school levels.—B. I. C.

Mental-hygiene implications of non-attendance, E. E. Harkary. *Ment. Hyg.* **21,** No. 4 (Oct. 1937) p. 608.

A discussion of why so many children hate to go to school and what can be done about it.—E. P. A.

Propaganda Analysis **1,** Announcement, No. 1 (Oct. 1937); How to detect propaganda, No. 2 (Nov. 1937).

The first two issues of "A Monthly Letter to Help the Intelligent Citizen Detect and Analyze Propaganda."

Americans are besieged by propaganda—expressions of opinion by individuals or groups deliberately designed to influence the opinion or actions of other individuals with reference to predetermined ends. Intelligent citizens must be able to recognize propaganda, to analyze and to appraise it. Seven very common propaganda devices are: (1) the name calling device, (2) the glittering generalities device, (3) the transfer device, (4) the testimonial device, (5) the plain folks device, (6) the card stacking device, (7) the band wagon device. These devices fool us because they appeal to our emotions rather than to our reason, and sway us to be "for" or "against" nations and races; religious, economic, and political policies and practices; household goods; wearing apparel; food.—R. V. H.

Danger signals of needed pupil adjustment, L. P. Thorpe. *School & Soc.* **46,** No. 1199 (Dec. 18, 1937) pp. 799–801.

"Some of the symptoms of impending maladjustments which can readily be detected by the rank and file of teachers as demanding the attention of the mental hygienist as well as by clinicians (psychologists) are offered here with brief comments."—E. P. A.

COLLEGE

Participation of the teachers college in curriculum development, J. P. Wynne. *Curriculum J.* **9,** No. 1 (Jan. 1938) pp. 11–13.

Since success in curricula is largely dependent on the teacher, it is important that a program of curriculum development secure the indirect or direct participation of the teacher-training institution.—B. I. C.

Critical questions for the evaluation of research, D. E. Scates and C. F. Hoban, Jr. *J. Educ. Research* **31,** No. 4 (Dec. 1937) pp. 241–254.

Ten simple, direct questions are discussed which can be used either by the research worker or the reader in evaluating a given piece of research.—B. I. C.

A serious charge. Education neglects its fundamental bases, W. W. CHARTERS. *J. Higher Educ.* **8,** No. 7 (Oct. 1937) pp. 351–356.

Teachers need as sound education in psychology, physiology, nutrition, and sociology as doctors have in anatomy and pathology. These are essentials of their profession, but preparation in them is at present more comparable to that of nurses than that of doctors.—B. I. C.

A new plan for concentration, T. R. McCONNELL. *J. Higher Educ.* **8,** No. 8 (Nov. 1937) pp. 417–424.

The underlying idea of college organization represented at the University of Chicago and at the General College of the University of Minnesota are contrasted, and the plan used at Cornell College whereby students in the upper years choose a problem for study and work out with a faculty committee an individual "functional major" is described.—B. I. C.

Maintaining English skills, F. KEREKES and P. LANGE. *J. Higher Educ.* **8,** No. 8 (Nov. 1937) pp. 435–441.

Describes the plan used at Iowa State College by which a committee on student English works with the faculty to grade papers and assist undergraduate and graduate students with written work, speech handicaps, and speed of reading, and other language difficulties.—B. I. C.

Sitting one's way through college, K. I. BROWN. *J. Higher Educ.* **8,** No. 9 (Dec. 1937) pp. 457–463.

Eleven types of achievements worthy of a college diploma are discussed by the author. —B. I. C.

Honors in a state university, R. SNOW. *J. Higher Educ.* **8,** No. 9 (Dec. 1937) pp. 464–470.

A description of the way in which Ohio State University has applied the program leading to a degree with distinction to 110 students in 20 departments over the past 6 years.—B. I. C.

Mental hygiene service for colleges and universities, T. RAPHAEL. *Ment. Hyg.* **21,** No. 4 (Oct. 1937) pp. 559–568.

The conclusions and recommendations reached at the second National Conference on Student Hygiene by the subcommittee on mental hygiene deal with the importance of mental health, needs for a service along psychotherapeutic lines in colleges and universities, qualifications of workers, size of load per worker, proportion of student body annually requiring such service, the nature of problems met, organization of the service, and its activities in relation to the whole college program.—E. P. A.

Entrance requirements for the tax-supported liberal arts college, P. P. BOYD. *School & Soc.* **46,** No. 1198 (Dec. 11, 1937) pp. 737–741.

The duty of the tax-supported liberal arts college to raise the general level of all high school graduates so far as possible in culture and in social and political understanding is pointed out. The tax-supported liberal arts college should not bar graduates of accredited high schools because of their variation from a particular pattern of subjects but rather should have a lower division curriculum suited to the individual abilities, interests, and plans of each student.—E. P. A.

ELEMENTARY AND SECONDARY

Of the children, by the children, for the children, S. A. COURTIS. *Childhood Educ.* **14,** No. 3 (Nov. 1937) pp. 101–105.

If "the basic element in democracy is faith in the power of human personalities to improve themselves if given a chance," then changes in many educational procedures are necessary. How and why these changes should be made is clearly stated.—R. V. H.

Danger signals in the club program, E. S. SMITH. *Educ. Meth.* **12,** No. 2 (Nov. 1937) pp. 80–83.

High school clubs sometimes manifest disintegrating qualities which can be remedied through skilled counseling by an alert sponsor. Check lists which indicate positive characteristics of a healthy club validated by five years'

study have been devised for student use in evaluating the club's programs, the quality of student leadership, and the quality of faculty leadership. A list of 18 positive criteria are presented for the sponsor's use in further evaluation of a healthy club.—R. V. H.

Occupational information in the small community, F. E. CLARK. *Occupations* **16,** No. 2 (Nov. 1937) pp. 117–124; **16,** No. 3 (Dec. 1937) pp. 245–251.

The writer suggests ways and means by which part-time guidance workers may provide themselves with occupational information and describes how a field study of jobs in a local community can be undertaken.—M. W.

Youth and education for family life, E. MCGINNIS. *Parent Educ.* **4,** No. 2 (Dec. 1937) pp. 80–85.

"Recent statements suggesting new emphasis in family education on the secondary level are examined in relation to some books on current practice and some books for high school students." There is need for integration of the content and materials which secondary schools are offering youth today and an urgent need for new and vital materials.—M. W.

Safety and health for the school year, J. F. ROGERS. *School Life* **23,** No. 2 (Oct. 1937) pp. 37–38.

The consultant in hygiene of the Office of Education emphasizes practice rather than theory in provisions for sanitation, safety, school feeding, and health services. The school dietitian, dentist, dental hygienist, home economist, health teacher, and janitorial service, also the laboratory services of the city health department, are all seen as essential components of an effective program of school feeding.—S. M. B.

Who buys—what and how? *School Life* **23,** No. 4 (Dec. 1937) p. 114.

A report of a "buying practice" study made by home economics supervisors in the southern states. The returns cover expenditures by families of home economics students in rural and town high schools for a wide range of home needs.—S. M. B.

Status and trends of college entrance requirements, M. E. GLADFELTER. *School Rev.* **45,** No. 10 (Dec. 1937) pp. 737–749.

A survey of the entrance requirements for admission to 146 American colleges and universities shows changes during the past decade in attitudes of institutions toward unit requirements, quality of preparation, recommendation of principals, aptitude, psychological and achievement tests, and personal qualifications.—E. P. A.

Criteria for evaluating course of study materials, H. B. BRUNER. *Teachers Coll. Record* **39,** No. 2 (Nov. 1937) pp. 107–120.

The criteria here set up for evaluating courses of study apply to elementary and secondary school courses in any subject or group of subjects. They deal with philosophy, content, activities, and evaluation.—B. I. C.

Measuring the amount of activity education in activity and control schools in New York City, W. A. MCCALL, J. P. HERRING, and J. J. LOFTUS. *Teachers Coll. Record* **39,** No. 3 (Dec. 1937) pp. 230–240.

A school-practice questionnaire has been designed to measure the extent to which a school has such characteristics of democratic activity as discussing situations, living in the community, initiating activity, using committees, using tools and material and art, living happily with others.—B. I. C.

FOOD COMPOSITION

Contributed by the staff of the Food Composition Section, Bureau of Home Economics, United States Department of Agriculture

Organic acids of the ripe banana, P. L. HARRIS and G. L. POLAND. *Food Research* **2,** No. 2 (1937) pp. 135–141.

The method and the results of a qualitative study on the acids present in the pulp of the banana are presented in some detail. Bananas of the Gros Michel variety from Puerto Rico were used. From the data it is evident that malic acid is the principal acidic constituent of the ripe banana, apparently occurring as free acid. Results of a quantitative study to learn how this acid varies in amount during the ripening process in a commercial ripening room indicate that the *l*-malic acid content increases to a peak, then gradually decreases as the fruit matures, with a range of variation from 0.053 to 0.373 per cent to approximately 0.314 per cent at the stage of ripeness at which the fruit is usually eaten. During the first four or five days of ripening there are apparently acidic substances other than malic acid present in the fruit, since titratable acidity is in excess of acidity due to malic acid. From the stage of ripeness at which the peel is more yellow than green to the dead-ripe stage, however, titratable acidity is a measure of the *l*-malic acid content of bananas. A bibliography is included, and the literature is reviewed briefly.—G. A.

Best varieties of soybeans for food being located. Ill. Agr. Expt. Sta. Ann. Rept. (1936) pp. 298–300.

This report on palatability and cooking quality of green vegetables and commercial types of soybeans represents part of the home economics investigations carried on during the year ending June 30, 1935. Data are presented on the composition of 4 green vegetable varieties in the fresh green shelled state and again as the mature air-dried beans. For fresh vegetables the green shelled beans are rich in protein, fat, and ash, the percentages reported for these constituents varying, respectively, from 10.03 to 13.28, from 5.44 to 6.98, and from 1.48 to 1.83. In the air-dried mature beans, the percentages varied from 35.86 to 41.16 for protein, from 17.44 to 20.33 for fat, and from 4.54 to 5.12 for ash. Moisture and crude fiber are also reported.—G. A.

Cooked meats and poultry classified by chemical composition, C. CHATFIELD. *J. Am. Dietetic Assocn.* **13,** No. 4 (Nov. 1937) pp. 312–319.

For purposes of dietary calculations, cooked meats are classified according to characteristics which can be judged and which are related to chemical composition, especially to protein and fat content. The characteristics are proportion of fat and degree of dryness or of doneness. The classification disregards species of animal, cut of meat, and method of cooking. Data from analyses, mostly published, of 577 samples of cooked meat are presented as frequency distributions according to protein and fat content. Eight classes are set up.—C. C.

Composition of certain beef cuts as affected by grade, location in cut and method of cooking, M. ROGERS, I. GILLUM, B. L. KUNERTH, and M. S. PITTMAN. *J. Am. Dietetic Assocn.* **13,** No. 4 (Nov. 1937) pp. 320–324.

Original analytical data on 9 samples each of raw and cooked beef. Data are given on the proximate constituents of all samples and on calcium, phosphorus, and iron content of all the cooked and three of the raw samples. Cuts studied were round, clod, and rib, in grades from medium to choice and cooked by braising or by roasting. To show the effect of cooking, analyses of three paired roasts, raw and cooked, all good grade, were included.—C. C.

FOOD UTILIZATION

Contributed by the staff of the Food Utilization Section, Bureau of Home Economics, United States Department of Agriculture

The making of potato chips in relation to some chemical properties of potatoes, M. C. ROGERS, C. F. ROGERS, and A. M. CHILD. *Am. Potato J.* **14,** No. 9 (Sept. 1937) pp. 269–290.

Chippewa, Russet Burbank, and Warba potatoes were made into chips to determine what chemical conditions of the potato affect the quality of chips; how the frying technique must be modified to suit the varying condition of the potato; and the effect of storage on the chemical composition of potatoes, the quality of chips, and the frying technique. No relation was shown between the ash and nitrogen content of the potato and the quality of the chips. The frying temperature was found to be the most important external factor in making good chips, the optimum varying with the variety and sugar content of the potatoes. The relation of the mass of fat to the mass of raw slices was a significant factor in the initial temperature. The most obvious effect of storage (40°F.) was the increase in sugar and the need for a lowered frying temperature. During the later part of the storage period, soaking potato slices tended to cause less loss of dry matter and nitrogen, with a tendency toward increase in chip weight along with the quantity of fat used.—E. F. W.

The suitability of Leguminosae for cooking, E. MIÈGE, BRODSKIS, and COURTINE. *Bull. de la Société Scientifique d'Hygiène Alimentaire* **25,** Nos. 3 and 4 (1937) pp. 147–152.

A study was made of the changes taking place in certain varieties of peas grown under different conditions and at different stages of maturity. Chemical analyses and microscopic examination showed that the change in the peas during cooking is not a bursting of the cells with a liberation of their contents, but the dislocation and progressive separation of the cells. The rate of change depends on the amount and nature of the intercellular cement, which consists of pectic material with a middle lamella of calcium pectate. During boiling, the pectic material hydrates, liberating the cells, while the insoluble calcium pectate opposes their dissociation. Factors which facilitate accumulation of calcium and precipitation of pectic material retard cooking.—F. B. K.

Effect of freezing and thawing beef muscle upon press fluid, losses, and tenderness, P. PAUL and A. M. CHILD. *Food Research* **2,** No. 4 (1937) pp. 339–345.

Rolled roasts of the 9–10 and 11–12 ribs of medium-grade steers were frozen at −18°C. The unfrozen beef was found to lose less in thawing and cooking than the frozen. Frozen beef lost less when thawed at 175°C. than at 24° and 25°C. Thawing temperature did not affect the press fluid content of frozen beef. The total moisture, drip, and tenderness of the cooked beef were unaffected by freezing or by different thawing temperatures.—F. B. K.

Seasonal influences which affect the quality of canned tomatoes, M. E. SMITH. *Fruit Products J. & Am. Vinegar Ind.* **16,** No. 12 (Aug. 1937) pp. 364–366, 377.

Tomatoes picked before being well ripened and finished under cover were found to grade low on color and flavor after canning. The best quality was obtained from vine-ripened tomatoes canned soon after picking. Seasonal factors that affected quality in the canned product were temperature and rainfall. The percentage of total solids increased when the weather was hot and dry and decreased slightly under precipitation. The yield of canned material per pound of raw fruit was highest during a hot, dry year, although the total production was lowest. The acidity of the tomatoes decreased when the temperature was high. Rain was followed by an increase of acidity. Invert sugars increased during high temperature and decreased slightly after rainfall. Pectin in the tomatoes increased slightly from the first packing in the season until about the middle of August, then remained constant or decreased. No correlation was found between pectin content and the variables temperature and rain.—M. C. S.

THE HOUSE, ITS EQUIPMENT AND MANAGEMENT

Engineering the household, P. B. POTTER. *Agr. Eng.* **18,** No. 9 (Sept. 1937) pp. 403–404, 406.

Most of the progress in household engineering has been made by manufacturers motivated by profit from the sale of devices the housewife could use and would buy. Largely through reading home magazines, the housewives have caught the urge to have these things, often expensive equipment beyond the means of the household. Home economists attempt to give advice on the selection and use of equipment, but they are not qualified to do this without the collaboration of engineers. Agricultural engineering departments should take up this work, hitherto neglected by engineers.

Design factors for small farm homes, H. E. WICHERS. *Agr. Eng.* **18,** No. 10 (Oct. 1937) p. 442.

Most house plans, even those appearing in farm magazines, are for urban or suburban homes. There are three main points in which the farm house differs from the suburban. It should have a central rear hall because most of the traffic is through the rear door. From this hall there should be direct access to all the rooms of the house. Since the driveway is the entrance to the farmstead, the front door should face the entrance drive and not the highway; otherwise visitors will come to the rear entrance instead of to the front door. An important feature is a workroom for heavy work, such as laundering, canning, taking care of meat; it should be located on the first floor with an outside entrance and access to the rear hall and should have a concrete floor with a floor drain, a cabinet, a sturdy table, a sink, and a stove.

Recent advances in our knowledge of the problem of air conditioning, C.-E. A. WINSLOW. *Am. J. Pub. Health* **27,** No. 8 (Aug. 1937) pp. 767–776.

Outside of industry we have little exact information as to the effects of atmospheric dust upon health. There seems to be no basis whatever for a general program of atmospheric disinfection in living and work places. Variations in oxygen and carbon dioxide content of the atmosphere seem relatively unimportant; but a sufficient volume of air should be provided in order to avoid odors which adversely affect appetite. In connection with the loss of heat from the body, four environmental factors must be studied: air temperature, air movement, humidity, and radiation. Increased emphasis on the insulation of occupied spaces seems of special significance. It is important to recognize that heating and ventilating are two distinct processes, often antagonistic. In ordinary living rooms and offices, infiltration and the use of windows will suffice to produce necessary air changes. The factor of air movement is not an important variable in the heating season. Relative humidity is not particularly important except where high temperatures occur. Summer cooling presents an entirely different problem and would be desirable within certain limits. Many people have been harmed by the sharp contrast between air-conditioned trains and the outside atmosphere.

Residential air conditioning systems, B. S. BEACH. *Architectural Record* **82,** No. 3 (Sept. 1937) pp. 112–115.

A main reason for the interest in home air conditioning is the continued expectancy that home cooling in summer is just around the corner. However, there are as yet considerable technical difficulties in the way of producing low-cost cooling systems for home use. Air conditioning in winter is now obtainable at moderate cost. There are four main systems: (1) individual room units for summer and winter use; (2) direct-fired, all-air basement type units with forced air circulation, heated by gas, oil, or coal; (3) indirect-fired combustion boiler and air-conditioning unit for the use of all-air or part-air and radiators, costing from 30 to 35 per cent more than system 2 but more efficient; (4) gravity circulation warm-air furnace improved with humidifying apparatus and cleaning devices. A ten-room house in the $12,000 to $15,000 price range may have an air-conditioning system installed for $1,500. For summer, attic fans which

draw cool night air into the house may be installed for $250 to $350; the temperature may in that way be lowered from 10° to 12°F.

Chicago installs new mains for air conditioning. *Bldgs. & Bldg. Mgt.* **38,** No. 1 (Dec. 1937) p. 54.

The greatly increased use of air conditioning in downtown Chicago has made it necessary to lay new cast-iron water mains in State Street. Summer cooling equipment requires a tremendous quantity of water. One of the largest Chicago stores uses water at the rate of 3,000,000 gallons a day, an amount corresponding to the normal supply for a city with a population of 30,000. The U. S. Department of Commerce reports that most of the larger cities will be faced with the necessity of laying more and larger water mains if air conditioning is to follow public demand.

Air conditioning and health. *Bldgs. & Bldg. Mgt.* **38,** No. 1 (Dec. 1937) p. 79.

Physicians stress the need for educating the public in the proper use of air conditioning. Shock may be produced because of the difference between indoor and outdoor temperature. People eat more and heavier food in air-cooled rooms in summer; this results in increased metabolism and lessened ability of the body to adapt itself quickly to changed atmospheric conditions.

Modern design and mortgage security, H. P. VERMILYA. *Insured Mortgage Portfolio* **2,** No. 3 (Sept. 1937) pp. 15–17, 24.

With ownership of homes changing more frequently than formerly, increasing importance attaches to the house itself as the physical security of the mortgage, and to its environment. A marketable house must be durable in construction; planned for convenience in living; equipped for safety, light, and sanitation; of good design; and located in a well-protected and stable community. Modern design in architecture is difficult to appraise. It cannot be dismissed as a temporary fad. To meet the requirements of modern living, the conventions of symmetry and classical proportions have been given up as too costly; and the attempt is made to harmonize the more complex spatial arrangements of our day by asymmetric balance and homogeneous character rather than abstract proportion. If this movement toward a modern architecture is fundamentally sound, consumer acceptance is inevitable. Such design is usually adaptable to the panel type of construction, which seems to hold the greatest promise as a structural system for domestic architecture.

Evaluation of certain factors affecting the cost of using utensils on electric heating units, M. M. MONROE. Maine Agr. Expt. Sta. Bull. 386 (June 1937) 155 pp.

Methods of investigation are discussed in detail and recommendations for similar studies are given. It was found that the extent of the area of contact between the utensil and the closed or ring units affects cost and time of heating more than any other factor. Solid surfaced, closed units are most sensitive to differences in contact with the utensil. Flat-bottom pans as purchased on the market are likely to have a concave bottom surface. Black bottoms on aluminum pans or other polished metal pans reduce time and cost of heating to the boiling point when used on the cone, open, or tubular type of unit. The height and polish of utensils suitable for use on 1,000- to 1,200-watt units are not likely to affect materially the cost of heating foods to boiling temperature but may affect the amount of current needed to maintain it. A cover may be essential for the maintenance of boiling temperature if medium or low wattage is used and is essential for a wide pan even when higher wattage is used. Triplicate sets of saucepans are economical when used on small units. An insulated low-wattage cooker may be more economical for low-temperature, long-time cooking than special waterless cookers.

Housing under the Resettlement Administration. *Mthly. Labor Rev.* **44,** No. 6 (June 1937) pp. 1387–1400.

Of the 97 housing projects undertaken by the Resettlement Administration, 29 had been completed and 68 were under construction in April 1937. At completion there will be 30 rural industrial communities where low-income families will have plots for subsistence farming

to supplement their industrial income; 32 agricultural communities where families are expected to derive all their income from farming and allied co-operative activities; 32 projects where families are set up on individual farms but depend on existing communities for educational and social facilities; and 3 suburban towns established near cities where a shortage in low-cost housing exists. In addition to bettering the economic and social status of the resettled families, these projects are expected to serve as demonstrations of what might be accomplished on a wide scale if planning were adopted generally. As fast as projects are completed, the Resettlement Administration plans to turn them over to local management. Resettlement Administration communities are financed wholly by the federal government. The difference between cost and sales price may run as high as 25 per cent. In the 3 suburban communities, houses will be rented, not sold. Ninety-three and one-tenth per cent of monthly levies on occupied properties were paid up in April 1937.

Co-operative activities of a group of apartment-house residents, V. LORWIN. *Mthly. Labor Rev.* **45,** No. 2 (Aug. 1937) pp. 312–315.

Residents of the Carl Mackley apartment house in Philadelphia, a P.W.A. project, have undertaken several co-operative enterprises. The first venture was a credit union. It now has 200 members, and the loans are used chiefly to purchase merchandise, refrigerators, cars, clothes, at cash prices instead of on the installment plan; to liquidate previous commercial loans; or to pay doctors' bills. A co-operative grocery store is being operated. The members began with a small buying club which by means of volunteer labor distributed goods in the auditorium of the apartment house. They have now taken over the grocery store already in existence in the buildings. Two experienced clerks, members of the retail clerks' union, have been retained. The business has gained steadily and now exceeds $750 a week. The co-operative association also operates a parking lot with a hired watchman. The charges are at present $1.75 a month. About 40 families buy milk from a private distributor at a discount. In addition to these voluntary enterprises there are provided in the building a swimming pool, a craft room, an auditorium, a nursery, and laundry rooms with electric washers and driers. The Mackley apartments thus represent not only low-cost modern housing; they also form a community.

Oil heat costs $172 annually. Saves on house cleaning. *Natl. Petroleum News* **29,** No. 51 (Dec. 22, 1937) p. 15.

The Oil Burner Institute reports that it costs $214.45 a year to heat an 8-room house with gas-fired central heating. With oil, the cost is $172 and with coal, $120. Coal furnaces required about four visits to the cellar daily. The automatic heaters required no attention and also reduced cleaning time.

A study of selected types of domestic gas stoves, A. E. BARAGAR. Nebr. Agr. Expt. Sta. Research Bull. No. 86 (Nov. 1936) 74 pp.

The methods used in testing the efficiency of household gas cooking stoves are described. The tests indicate that a change in the position or application of the burner is needed to increase efficiency when small utensils are used. The burner might be raised nearer to the bottom of the pan, but in that case a lower gas pressure is needed for safety. Another way would be to insulate the grate thermally from the stove top in order to decrease the conduction of heat through the stove. In general, the burners were found to be satisfactory; but to prevent clogging of a burner because of boilovers, it must have some protection for the ports and lighter system. Automatic lighters were not found entirely dependable in all cases. In oven tests it was found that at a temperature of 400°F., 43 per cent showed inaccurate thermostat adjustment, and that after adjustment only 14 per cent would have temperatures as low as 300°F. Neither the heat loss from the ovens nor the time required for preheating was proportionate to the thickness of the insulation.

M. C. H.

MISCELLANY

Teaching Homemaking to Adults. To meet the continuing demand for copies of "Units of Work for Adult Homemaking Classes," which was noted in the JOURNAL for October 1936, the authors, Helen Livingstone and Naomi Voegele, have had them mimeographed and bound together into a pamphlet entitled "Teaching Homemaking—Adult Education." It will be remembered that the units were prepared especially for use in courses offered in New York City by the vocational and extension service division of the New York State Education Department. The new pamphlets may be purchased for $1 each from the Organization Service Associates, 405 West 23d Street, New York City.

Home Economics for Boys. The Office of Education, U. S. Department of the Interior, has issued a 5-page mimeographed bibliography on this subject, which includes books, bulletins, magazine articles, and even 16 unpublished master's theses. The serial number is Miscellaneous 2002.

Poliomyelitis. "The Crippling Effects of Anterior Poliomyelitis" is the leading article in the November 1937 issue of *The Child*, the monthly news summary from the Social Security Program for Children carried on by the Children's Bureau, U. S. Department of Labor. Among the interesting things in the article is the account of the co-operation which the Program is offering to states in providing for children crippled by this disease and a map showing the incidence of "polio" throughout the United States in 1937.

Age and Youth in Russia and the United States. Dr. Ira S. Wile of New York is authority for the statement that Russian hospitals for the mentally ill include many more patients between 20 and 29 years old than those of the United States, while ours include many more over 50 years old. As reported in *Science News Letter*, he says that schizophrenia, mental disease of youth, is the diagnosis for 39 per cent of the Russian mental patients, as against 22 per cent here. In this connection it should be remembered that whereas in Russia both the birth rate and the death rate are higher than with us, our birth rate is decreasing and at the same time medical science is preventing early deaths, so that more and more of our population reach the age when arteries harden and minds become dimmed with the years. In fact, although our total population is lower than that of Russia, we actually have a larger number of persons over 60.

Geriatrics. With the increasing proportion of elderly people in our population, there is need for a term which will cover the care of the aged as pediatrics does that of children. An editorial in the *Journal of the American Medical Association* for December 25, 1937, advocates adopting the word geriatrics (from *geras*, a Greek word meaning old age) for "that division of medicine which deals with the treatment of the diseases and special problems of old age and senescence." It also says "disease in old age differs in many ways from disease in younger groups; the incidence is different and the symptoms often diverge widely from those seen in middle and early life."

"Mental Hygiene in Old Age." Six lectures bearing on this crucial but neglected problem in family relationships and social service were offered last spring by the New York City Committee on Mental Hygiene of the State Charities Aid Association and are now printed in pamphlet form by the Family Welfare Association of America, 130 East 22d Street, New York City. Single copies may be purchased there at 40 cents each, 10 copies for $3.

Peasant Costumes in Germany. The revival of the costumes formerly characteristic of different sections of Germany was officially promoted by the Nazi government in its Germanizing campaign, and adaptations of old peasant *Trachten* were frequently described in the women's magazines. A "clarification" from the Reichsbauernführer (the national farmers' leader) which appeared in a recent issue of *Die Deutsche Landfrau* suggests that the emphasis is changing. While local styles

and materials are to be encouraged in house and work dresses for rural women, they are not approved for more elaborate costumes for special occasions because they tend to emphasize the distinction between different social groups and different sections of the country and because a dress for special occasions offers a legitimate opportunity for the play of individual taste. Cheap reproductions of peasant work costumes for general use are also disapproved on the ground that they are travesties of the original materials and workmanship.

"The Moral Equivalent of War." In the mass of patriotic and pacifist writing that has been poured out on the world since the turn of the century, one of the few permanently influential bits of reasoning is to be found in this essay by William James. Many of us will accordingly be grateful to the *Journal of the National Education Association* for reprinting it on page 284 of the December issue.

The Year's Worst. In its end-of-the-year medley of sad, great, terrible, odd, and fantastic happenings in 1937, *Business Week* lists "The Shelton, Connecticut, high school football team that made the worst record in the school history and blamed it on the fact that the only food in the school cafeteria was pie," and the will of the man who provided that "his five grandchildren, ranging in age from 28 down to 10, shall each in the next five years receive an annual bequest equal to the sum that he himself earns."

Floors for Hard Wear. The most satisfactory floor covering for post-office workrooms has been studied by the National Bureau of Standards. According to *Business Week*, tests were made by running a loaded hand truck 60,000 times around a circular track made of 20 different kinds of material. Flat-grained maple and linoleum gave the best results, with rubber perhaps satisfactory.

Government Standards for Fruits, Vegetables, and Dairy Products. Twenty-five charts planned "to provide students, graders, buyers for institutions and cooperatives, consumers, and other interested persons, with a graphic presentation of the chief requirements of Federal and State standards for fresh fruits, vegetables, nuts, and legal standards for dairy products," with their origin, interpretation, and use explained in a brief foreword, are given in a recent publication of the Consumers' Project, U. S. Department of Labor.

Onions without Tears. In Hungary a preparation of onions is said to be on the market which eliminates the lacrimose effect on the cook. According to *Industrial and Engineering Chemistry*, the onion is reduced to a flour; this is mixed with gelatin to form a thick pulp; salt and some form of fat are added (the latter to make the product easier to use in water); and the mixture is then shaped into lumps, balls, or cubes.

Llamas. Information both useful and entertaining about these Andean members of the camel family and the way in which their wool is utilized in textiles is contained in the illustrated pamphlet "Llamas and Llamaland" by Sylvan I. Stroock, 404 Fifth Avenue, New York City.

1938 Oranges. According to the prognostications of the Agricultural Adjustment Administration as set forth in its Consumers' Market Service, the 1937–38 orange season bids fair to be a record one, with a crop a fifth bigger and prices probably lower than last year's. Florida orange prices usually reach the year's lowest in December, with the seasonal upswing in February. California Navel prices are usually lowest in January and February, with the upswing by April. California Valencias are cheapest in May and highest in October.

Japanese Packaged House. A knock-down house put out by a Tokyo department store for sale at 600 yen (about $170) was described in the *Architectural Forum* for September 1937. It is fabricated of wood, weighs about a ton and a half, and consists of about 40 standardized units which can be assembled in three hours. When set up, it has a porch, a living room, and a kitchen, and the total floor space is about 30 x 30 feet. The manufacturers

claim it is suitable "for living by four or five persons." A picture of the cottage was given on page 66 of *Business Week* for September 18.

Rubber. The pamphlet "Rubber and Agriculture" from the Rubber Growers' Association, 19 Fenchurch Street, London, includes sections on rubber footwear and the uses of rubber in the farmhouse. Among unusual items in the latter are latex-treated carpets and upholstery materials and sponge and cellular rubber for upholstery.

Adult Study and Consumer Problems. The Service Bureau for Adult Education, maintained by New York University, issues a "pamphlet research service for the adult reader" which is entitled "Adult Study Guide" and which notes selected reading references on various topics. The main subject covered in the January issue is consumer problems. The Guide is issued monthly from October through May and may be obtained for 15 cents a single copy or $1 a year from the Division of General Education, New York University, 20 Washington Square, North, New York City.

Meat Cuts and Their Uses. An unusual and ingenious device for showing how to utilize different cuts of meat is used on a meat-cutting chart prepared by one of the large packing companies. From a diagram of the sections or cuts of a side of beef, lines extend outward, first to pictures of the cut which the butcher arranges from it and then on to pictures of the cut cooked and ready to serve.

"Business Digest." A wide variety of publications is drawn on for this monthly summary of "current thought and writing on advertising, selling, merchandising, finance, labor and industrial relations, management, production, business psychology, invention and research, transportation, legislation, and all the other important phases of commercial activity." It is published at 418 South Market Street, Chicago, Illinois.

"Readings in Georgia Literature." The selections from Georgia literature which William T. Wynn has brought together in this book vary from a hymn by Charles Wesley to a few pages from *Gone with the Wind*, and include excerpts from other widely known authors, such as Corra Harris, Joel Chandler Harris, Richard Malcolm Johnston, Sidney Lanier, not to mention General James Oglethorpe, founder of the Georgia colony. The book is published by Turner E. Smith and Company of Atlanta.

Educational Abstracts. This digest, formerly published by Norman J. Powell and Associates of New York City, was formally accepted by the National Council of Phi Delta Kappa, professional and fraternal association of men in education, at its biennial meeting in Cincinnati, December 29, 1937, and is now being published by the new owner. The former policy in summarizing and abstracting significant books and magazine articles in the field of education will be extended and expanded. *Educational Abstracts* is issued bimonthly, five times a year. Editorial offices are located at 1180 East 63d Street, Chicago, Illinois.

X-raying the Oranges. The California Fruit Growers Association finds that X-rays are kinder to oranges than human inspectors when the fruit is examined for marketing quality, the men rejecting many that the machine shows to be sound and merchantable. According to *Business Week*, the Association is installing three X-ray testing machines, complete with fluoroscopes, and expects that this year they will earn six times what they cost.

NEWS NOTES

GENERAL

International Housing Conference. The week of August 13 to 20 has been set for the conference of the International Federation of Housing and Town Planning to be held next summer in Mexico City at the invitation of the Mexican government. The meetings will be followed by a six- or seven-day tour of Mexico and visits to some cities of the United States. Topics of discussion included on the tentative program issued in January are underground provision for water, sewers, gas, electricity, and other services; housing in tropical and subtropical countries; and provision for leisure activities, including household arts and crafts, public parks and playgrounds, scouting and camping. In addition, there will probably be conferences on the training of architects and town planners and on municipal administration. Persons desiring to take part or organizations wishing to send delegates are requested to indicate this to Monsieur le Secrétaire Général, Fédération Internationale de l'Habitation et de l'Urbanisme, 47, rue Cantersteen, Maison Shell 608, Bruxelles, Belgium. Further information may be obtained at the same address.

Radio in the Schools. With the help of a two-year grant from the General Education Board, the Bureau of Educational Research of Ohio State University has launched what it hopes will be a five-year study of radio broadcasts planned for school use. It is one of a series sponsored by the Federal Radio Education Committee, will have the co-operation of both schools and broadcasting companies, and will be under the direction of I. Keith Tyler.

Child Life Achievement Award. To give public recognition to the unselfish work of educators in behalf of the children of America, *Child Life Magazine* (Rand McNally and Company) is arranging for an award to be made annually on May Day—Child Health Day—to the man or woman who, in the opinion of the award committee of leading Americans, has "accomplished most in the interest of children's education during the past year." An antique bronze statuette of a child, designed by Mabel Landrum Torrey, noted sculptress, will be presented to the winner, suitably engraved.

Mrs. Sarah Tyson Rorer. Mrs. Rorer, a pioneer lecturer and demonstrator of cookery and housekeeping, died on December 28 at her home in Colebrook, Pennsylvania, in her eighty-eighth year. The Sarah Tyson Rorer Pension Fund (see page 61 of the January JOURNAL) wishes recent contributors to know that their gifts helped to defray the funeral expenses.

ALABAMA

Alabama Home Economics Association. Fourteen officers and committee chairmen met in Montgomery on January 8 to make plans for the state conference in March. Polly Thomas proposed a plan for meetings of student representatives on the different campuses of the state.

ALASKA

University of Alaska. Ruth Tucker, formerly on the staff of Kansas State College, has been appointed in charge of the home economics work at the University to succeed Lola M. Cremeans, who last May became the bride of Gray S. Tilly of Fairbanks.

CALIFORNIA

California Home Economics Association. *Bay Section.* The Home Economics Women in Business were hostesses to the section on January 15. A major portion of the program, in charge of Gladys Mason of the Sperry Flour Company, featured the 1939 Golden Gate Exposition. Dr. Henry Bitting described proposed food exhibits, and Mrs. Hazel Faulkner of the Women's Board told of plans for women's contributions.

Ella Lehr Nisja is in charge of the new experimental kitchen of the Botsford, Constantine, and Gardner Advertising Agency in San Francisco.

Northern Section. The January meeting was devoted to furthering home economics education through libraries, a state project under the chairmanship of Harriet G. Eddy.

Mrs. Mary A. Bohmfoulk, last year's chairman of the section, became the mother of a baby boy in December.

University of California. *Extension Service.* Harriet G. Eddy, state home demonstration leader, recently visited places in Mexico where home economics work is being carried on.

Hilda Faust, specialist in nutrition, is on sabbatical leave for graduate work at Columbia University.

Hazel Murray has resigned to do graduate work at the University of Chicago.

New appointees include Gertrude Lauché in San Benito County; Mrs. Ruth V. Schumacher in San Joaquin County; and Ruby Newberry in Yuba County, who succeeds Eleanor Meneilly, now Mrs. R. W. Southwick of Ventura, California.

CONNECTICUT

Connecticut College. Co-operating with the Save the Children Fund, the Home Economics Club sent a large box of gifts to needy Kentucky children. The members are now planning and supervising the preparation of free suppers for children at a local mission.

As part of a series of broadcasts conducted by the College over the local station, members of the home economics department are scheduled for talks on nutrition, housing problems, and child development.

Recently a group of seniors took a combined nutrition and institutional economics field trip to New York City, which included visits to the nutrition department and food analysis laboratory of the Board of Health, the Presbyterian Hospital, Dr. H. C. Sherman's and Dr. Mary Swartz Rose's laboratories, the consumer service department of the General Foods Corporation, the Governor Clinton Hotel, and Butler Hall.

St. Joseph College, Hartford. On February 1, Mrs. Helen Gaston Fish, an interior decorator, began a series of Wednesday-evening lectures on home furnishings to help those interested in better home environment. The lectures are illustrated by lantern slides, photographs, textiles, and accessories loaned by local shops.

Extension Service. The state and county extension staffs met at Connecticut State College in December for a two and one-half day conference. "How National and State Problems Affect Connecticut Rural Living" and "How Effectively Is the Extension Program Meeting These Problems" were discussed from industrial, sociological, and educational points of view. Each session was followed by a discussion period. Committees covering each session made reports and recommendations.

DISTRICT OF COLUMBIA

Retirement of Emma S. Jacobs. On January 22, Miss Jacobs' associates in the public schools of the District of Columbia gave a dinner at Wardman Park Hotel to celebrate her retirement after fifty years of service. When she left the normal school to organize the new course in domestic science in the District, such work was practically unknown and she and her one associate were veritable pioneers. Among the speakers at the dinner were: Dr. Frank W. Ballou, superintendent of schools; Mrs. Henry Grattan Doyle, president of the Board of Education; and Dr. Freda G. Winning, president of the Department of Supervisors and Teachers of Home Economics, N. E. A. Eugenia DeLand Saugstad, a former pupil, presented a guest book which she had made and in which all the two or three hundred guests at the dinner were asked to write their names; and Catherine Cowsill, as spokesman for the home economics teachers, presented a gold bracelet. Although Miss Jacobs has just reached the 70-year retirement age, her friends foresee for her many years of active usefulness.

IDAHO

Idaho Home Economics Association. Hazel Roach, field secretary of the A.H.E.A., conferred with officers and members of the Association in Pocatello and Boise on October 23 and 24.

The Moscow Homemakers Section of the

Association held its first monthly meeting on October 18. The program of work for the year includes study of recent developments in home economics as applied to problems of the home. Homemakers' groups of this kind are being organized in other towns throughout Idaho.

Student Clubs. A definite effort is being made this year to form a state organization. Each club has been asked to select some major educational problem to work on during the year, the results of which will be exhibited at the district meetings this spring.

State Department of Education. The first annual conference of homemaking teachers in Idaho was held in Boise from August 23 to 28. Concentrated study on curriculum revision was led by Dr. Florence E. Blazier of Oregon State College. Teachers at the conference organized into committees according to their geographical location so that they might meet at convenient centers for further curriculum work during the year.

This year the State Board for Vocational Education is emphasizing the development of the adult and part-time program. In co-operation with the National Youth Administration, two schools for out-of-school girls have been made possible, one at the University of Idaho, Southern Branch, Pocatello, and the other at the Intermountain Institute, Weiser. In addition to classes taught in several centers by the regularly employed homemaking teacher, courses in several phases of homemaking and parent education are offered at Coeur d'Alene.

Many Idaho schools have been remodeling their home economics departments in accordance with the newer trends in homemaking education.

University of Idaho. New home economics faculty members and their subjects or positions are: Louise Stedman, textiles and clothing; Esther Segner, home economics education, replacing Lillian Navratil, now state supervisor of home economics education; Stella Severtsen, supervisory teacher in the Moscow High School; and Leila Herron, part-time instructor in home nursing.

Sybil Smith of the U. S. Office of Experiment Stations was a guest of Dr. Ella Woods and the department of home economics after the nutrition conference in Spokane.

Southern Branch. The class for college men on Problems of the Individual and the Modern Home is proving popular.

Extension Service. Leatha Christensen, district home demonstration agent in the northeastern district, has been granted a year's leave of absence for study at Columbia University. Melba Olsen is her substitute.

Frances Gallatin and Marion White arranged a series of well-attended Achievement Days in the counties in their districts which featured exhibits of completed work and a style revue in which the women competed.

ILLINOIS

Illinois Home Economics Association. The Association has joined with the High School Conference and the Illinois Vocational Homemaking Teachers in a Home Economics Curriculum Committee to work on a state curriculum.

The college section is working on curricular studies under the following directors: Dr. Viola Bell of James Millikin University, "Consumer Education in College Courses"; Celine Neptune of Northern Illinois State Teachers College, "Family Relationships as Taught in High School Courses in the State"; and Virginia H. Weaver of the University of Illinois, "Transfer of Home Economics Credits in Institutions of Illinois."

State Board for Vocational Education. Rena L. Hodgen, a teacher in the Illinois schools for 18 years and a former member of the Extension Service, has joined the home economics supervisory staff.

Eastern Illinois State Teachers College. Clara Attebery, teacher-training instructor, has had a month's leave of absence to work on her doctor's thesis at New York University. She is working on a curricular problem in training home economics teachers for secondary schools.

State Curriculum Study. The Home Economics Curriculum Committee (see first Illinois news note) has organized a large general committee consisting of teachers working on the various local committees in the state and of city and state supervisors of home economics, teacher trainers in home economics, and other interested home economics teachers.

There is also a guiding committee consisting

of Bernice Tucker, Illinois State Normal University, chairman; Clara Attebery of Eastern Illinois State Teachers College, and Mary Handlin of Feitshans High School, Springfield. This committee is making an extensive study of home economics curricula throughout the country and will submit its material to the general committee for suggestions and revision. This committee discussed curriculum problems with Rua Van Horn of the U. S. Office of Education and Rena L. Hodgen, assistant state supervisor, at a conference in St. Louis on January 13.

INDIANA

Ball State Teachers College. Mrs. Florence Busse Smith, formerly of Iowa State College, who has been appointed supervisor of adult and part-time education in Indiana, will have her headquarters at the College.

The textile and clothing department was completely remodeled during the summer. Much new equipment was purchased, and the laboratory was enlarged.

Indiana State Teachers College. Luella Overn, whose appointment as curriculum specialist for the state was made possible by George-Deen funds, will have headquarters at the College. She will work on the new home economics manual which is to be released on July 1.

The Home Economics Club members were hostesses for the College Tri Club at a "pot luck supper" on January 11. Agnes Watson, state supervisor of home economics, Hortense Hurst, field supervisor, and Mrs. Burford, dean of women, were also guests. The theme of the meeting was "Social High Lights." Mrs. Burford reviewed the book *Log Cabin Lady*.

Purdue University. The annual Agricultural Conference was held at the University from January 10 to 14. Because of increased attendance each year, it has become necessary to hold the meeting in an auditorium larger than that of the Home Economics Building. This year's speakers included: Jack Stuart Knapp of the National Recreation Association, Esther Latzke of Armour and Company, and Julia M. Landers of the Indiana State Accident Prevention Bureau.

The Indiana home economics organization of rural women celebrated its 25th anniversary during the Conference. This year the organization includes 549 clubs, with a total membership of 15,563. The first state president was Mrs. Virginia C. Meredith, who remained honorary president until her death in 1936.

Professor Laura Partch and Helen Duff of the nursery school staff accompanied a group of seniors on a trip to Chicago to observe educational and remedial work with children. Places visited included the Juvenile Court and Detention Home, Spalding School for Handicapped Children, Hull House, Cook County Hospital, the Speech Clinic, Mary Crane Nursery School, and the Garden Apartments Nursery School.

IOWA

Iowa State College. The Home Economics Ball, sponsored annually by the Home Economics Club to finance scholarships for two junior students during their senior year, netted about $200 this fall. These awards are given to enable a club member who is of good standing in scholarship and activities and who is at least partially self-supporting to spend more time on extracurricular activity.

Dr. Vance presented a paper entitled "The Effect of a Midmorning Lunch upon the Subsequent Behavior of a Group of Nursery School Children" at the meeting of the American Association for the Advancement of Science in Indianapolis in December.

On January 10, Lydia Swanson gave an address on "Language as a Social Experience" at a Minneapolis meeting of nursery school teachers and parent education leaders. The meeting was part of a W.P.A. project.

Cora B. Miller and Mary Gabrielson spent January cruising aboard a freighter in the Caribbean.

Dr. Edith Elmer Wood will conduct a unit course on housing during the 1938 summer session. Jean Bowman of the consumer economics department will co-operate with her.

Dr. Paulena Nickell will teach a 3-week unit on Supervision of Home Management Houses at Columbia University from July 26 to August 13.

KENTUCKY

Eastern Kentucky State Teachers College. The College Home Economics Club initiated 20 new members at a banquet at the Glyndon Hotel on November 19.

The Home Economics Club recently affiliated with the Kentucky and American Home Economics Associations. The members celebrated the birthday of Ellen H. Richards at a supper in the clubroom.

Norriene Wasson, who completed the work for her bachelor's degree on February 1, is now assistant to the director of the college cafeteria.

University of Kentucky. The home economics district conferences with high school teachers, conducted this year by Miss Parker and Miss Lee, are emphasizing the problem of measurement in home economics.

Mary Lois Williamson is supervisor and itinerant teacher of adult work in Kentucky. This is the first year the state has been fortunate enough to have this type of program.

The number of students now enrolled for student teaching is double that of any previous year.

Grace McDaniel has been added to the supervisory teaching staff, and Rose Mary Codell is an apprentice teacher in home economics education.

Lexington. The *Lexington Leader* carried on December 23 a large picture of the Christmas display of the home economics department of the Lexington Junior High School. The display included articles made in a Christmas unit directed by Austin Lilly and designed to teach the making of useful gifts for the home and suitable toys for young children. The unit also included making packages gay with silvered sprays of pine, holly, berries, and unusual weeds.

MAINE

Farmington Normal School. Dean Helen E. Lockwood is on leave of absence this semester for graduate work at Cornell University.

University of Maine. The home economics teacher-training curriculum has been revised to increase greatly the amount of observation and supervised teaching and to offer a larger proportion of the required education courses from a home economics point of view.

The home economics department has converted an unfinished basement room into two attractive unit kitchens to be used for preparing meals for the nursery school and a co-operative dormitory off the campus. The arrangement and the use of color are serving as a demonstration of what can be done with such quarters.

Extension Service. Mrs. Ada Brooks, a former agent, was employed during February to make a study of the school lunch situation in two Maine counties.

Ruth Grady, also a former agent who at present is assisting in the Extension Service, will be employed for the months of April and May to give help with home management problems.

MARYLAND

Maryland Home Economics Association. *Student Clubs.* The high school clubs are developing a worth-while program this year under the leadership of M. Gladys Dickerson of Elkridge, state adviser of high school clubs. There are 4 club regions in the state with the following advisers: Mrs. Mark Sterling, Crisfield; Juanita Greer, Bel Air; Mrs. Curry N. Caples, Poolesville; and Ethel Grove, Friendsville.

A state meeting of clubs was held on October 16 at the University of Maryland at which the delegates from affiliated clubs adopted a state constitution and an initiation service and elected officers for this school year. Regional club meetings will be held this spring when the clubs will report activities, exchange ideas, have a picnic lunch, and put on stunts.

Plans are being made to send the state chairman of high school clubs to the Pittsburgh meeting as official delegate from Maryland. The clubs are showing great interest in attending this annual meeting of the A.H.E.A.

University of Maryland. Five new members have been added to the home economics staff: Mrs. Florence Busse Smith as temporary associate professor of home management; Vienna Curtiss, assistant professor of art; Polly May Kessinger, assistant professor of textiles and clothing; and Mary Emma Barnes and Mary Kirkpatrick, assistant professors of foods and nutrition.

MICHIGAN

Central State Teachers College. Ruth Hall, clothing instructor, talked on "The Well-Dressed High School Girl for 1938" when the high school home economics club at Remus entertained the clubs from Barryton and Mt. Pleasant at a program and tea in January. Seniors doing student teaching assisted by modeling garments to illustrate the talk.

Michigan State Normal School. Estelle Bauch went to the Scandinavian countries last summer as a member of the home economics tour conducted by Gudrun Carlson.

Mrs. Garoslav Kosè, wife of the founder of the American Institute at Prague and a former member of the secretariat of the League of Nations, visited the campus this fall and talked to the home economics group on home economics in Czechoslovakia.

Northern State Teachers College. Adah Hess, formerly state supervisor of home economics in Illinois, is now head of the home economics department.

The department is being reorganized so that in the future graduates may be prepared to teach in schools offering the vocational program.

As an intensive home project during the Christmas recess, Lsyle Hutton, a senior, took a 3½-year-old orphan child home with her for the vacation.

Western State Teachers College. Mrs. Ruth V. Schumacher resigned in December to accept a position in the California extension service, with headquarters at Berkeley.

Sophia Reed, formerly assistant state supervisor of home economics in Illinois, has joined the staff and will have charge of the Smith-Hughes program under the supervision of the State Board of Control for Vocational Education.

Detroit. A series of programs on careers for women, sponsored by the State Federation of Business and Professional Women, the Detroit Women's Advertising Club, the Board of Education, and the Home Institute of the *Detroit News*, has been featured over station WWJ. Topics have included: "Styling and Merchandising," by Mrs. Helen Hartman of the J. L. Hudson Co.; "Homemaking as a Career," Mrs. Luella Foster, president of the Detroit Home Economics Association; "French Dressmaking and Design," Nevarta Hampikiam of Wayne University; "Home Economist in Food Industry," Mary Barber, Kellogg Company; "Women in Tearooms," Jane Porter, Women's City Club; "Women in Hotel Business," Mrs. B. L. Thomas, Michigan Hotel Association; "Women in the Theater," Gwen DeLovey; "Women in Radio," Sally Woodward. The speakers told of the educational requirements, advantages and disadvantages, remuneration, and possibilities of the various vocations, also where training can be obtained.

MINNESOTA

Minnesota Home Economics Association. Dr. John Rogers Chadwick of the Hennepin Methodist Episcopal Church was the guest speaker at the February 3 meeting of the Association at the Minnesota Union on the University of Minnesota campus. His talk on "Man Making" was one of a series on family relationships to be given by different speakers. Margaret Higbee, supervisor of sewing in Minneapolis, is in charge of the series which is to provide the background for the year's programs of the Association.

University of Minnesota. Dr. Esther McGinnis, in charge of parent education at the Child Welfare Institute for a number of years, resigned to become professor of family life education at Buffalo State Teachers College, Buffalo, New York, on January 1.

Clara Brown read a paper before the education section of the American Association for the Advancement of Science during the December meetings in Indianapolis.

MISSISSIPPI

Mississippi State College for Women. The members of Baylor Fraternity, an honor society for students majoring in home economics, earned $30 toward the student scholarship fund by making fruit cakes for which they took orders during the Thanksgiving vacation.

Genevieve Bucknell of Battle Creek Hospital has been appointed dietitian in charge of the College dining hall to succeed Bernice Giles, who resigned to become home demonstration agent in Maury County, Tennessee.

A new course in adult education is being offered in the home economics department. May Cresswell, state agent in charge of home demonstration work, is offering a course for senior home economics majors.

Mississippi Vocational Association. The annual meeting will be held at the Edwards Hotel, Jackson, on April 15 and 16. Druzilla Kent, professor of home economics education at the University of Tennessee, will be guest speaker at the general session on April 15.

Extension Service. May Cresswell, state agent in charge of home demonstration work in Mississippi, attended the Alabama farm and home agents county program-planning meeting in Auburn, Alabama, on January 12.

Mary Rokahr of the U. S. Office of Cooperative Extension was in Mississippi during the last week of January to follow up the work on home accounts.

MISSOURI

Christian College, Columbia. Beryl Schiele, a graduate of Iowa State College and the New York University School of Retailing, has succeeded Mrs. Edna Anderson Lyles as instructor of textiles and clothing. Miss Schiele is also the school's stylist and adviser to girls.

In addition to having regular programs of varied interest, the Home Economics Club has been active in promoting a spirit of good fellowship among its members. Each student is a "secret pal" to some other member, endeavoring at all times to help and befriend but without revealing her identity.

University of Missouri. Mabel V. Campbell is on sabbatical leave for study at Ohio University. Dr. Bertha Bisbey is acting head of the department.

Bertha K. Whipple spent six weeks last summer on a cruise to Iceland, Norway (including the North Cape), Sweden, Denmark, Finland, Estonia, and Russia.

Dr. Virginia Batie White, formerly director of home economics at Fontbonne College, has been added to the home economics faculty.

W.P.A. Nursery Schools. There are 24 W.P.A. nursery schools in Missouri, each equipped to care for 30 children. Seven of the schools are for negro children and all are under the supervision of Dr. Dura Louise Cockrell. The local school board provides a room in a school building, and various organizations provide clothing, shoes, and play equipment. Each staff consists of a head teacher, an assistant teacher, a nurse, a combination cook and dietitian, and a laundress, plus the daily services of a registered nurse. Doctors and dentists give their services, and the cooperation of health departments has been excellent.

Home Economics in the Farm Security Administration. Forty-two county home supervisors and 3 district home supervisors are working under Margaret Dreisbach, associate state director of the F.S.A. in Missouri. Because proper nutrition and good health are essential to the rehabilitation of low-income farm families, chief emphasis has been placed on a food production and preservation program; but assistance has also been given in problems of clothing and inexpensive home improvement. Emergency medical care has been secured; women have been given better social and recreational contacts, especially by participation in home economics extension clubs; regular school attendance has been encouraged; and by planning with their families high school education has been made possible for boys and girls.

MONTANA

Vocational Conference. The annual conference of vocational home economics teachers in Bozeman drew the largest attendance of any home economics teachers' conference ever held in the state. Mrs. Dora S. Lewis of the U. S. Office of Education acted as conference leader and assisted the group in developing a new state course of study. Lelia Massey, state supervisor of home economics education, led a discussion reviewing home economics progress in Montana since 1923, from which the group drew conclusions about needs of the home economics program in the state. The points brought out were kept in mind in planning the new course of study. The work on the course will be continued throughout the year by small groups of home economics teachers.

OUR CONTRIBUTORS

Rachel Davis-DuBois, director of the Commission on Intercultural Education of the Progressive Education Association, which has headquarters in New York City, has spent a number of years lecturing and working in public schools in an effort to sensitize teachers and school authorities to the problems of intercultural and interracial relations within the school and community. Her leadership in this field is an outgrowth of long experience as a classroom teacher and as a principal on both the elementary and secondary levels.

Dr. Miles A. Tinker joined the psychology staff at the University of Minnesota in 1927 and has been an associate professor since 1935. He has made numerous studies and written textbooks, monographs, and many articles on the psychology of reading, including eye movements in reading, legibility of type, and reading perception; on the applied psychology of lighting; and on factors involved in the measurement of intelligence and aptitudes.

Dr. Jennie I. Rowntree, professor of nutrition at the University of Washington, holds degrees from the Universities of Wisconsin, Chicago, and Iowa.

Louise Stedman made the study reported in this issue while a candidate for the master's degree at the State University of Iowa. Last fall she joined the staff of the clothing department at the University of Idaho, after a number of years of teaching experience in the Des Moines public schools. **Merle Ford,** assistant professor of home economics at the State University of Iowa, directed the study made by Miss Stedman.

Leila F. Venable, chairman of the American Home Economics Association's division on the house, represented the Association at the conference of the National Association of Housing Officials last November. She is on the staff of Florida State College for Women.

Margaret Brown has been in the Pennsylvania Extension Service since 1917 and in charge of its home economics work during the last four years.

Azalea Sager, home demonstration leader in Oregon since 1936, has been in extension work for twelve years. Before being made a state home demonstration leader, she held positions as specialist in clothing and textiles and as home demonstration agent.

Elsie M. Maxwell, a former supervisor of home economics in the Spokane and Akron public schools and head of the home economics department at the University of Idaho since 1936, directed the study which **Mrs. Reva Cree Tweedy** made at the University while working for her M.A. degree. The latter is now teaching in the high school at Caldwell, Idaho.

Edith Rhyne, associate professor of clothing, textiles, and related art at Oregon State College, directed the work which **Frieda Mae Bennett** did at the College while a candidate for the master's degree. At present Miss Bennett is clothing specialist in the Missouri Extension Service.

Dr. Hazel M. Hauck, now professor of home economics in the department of foods and nutrition at the New York State College of Home Economics at Cornell University, has taught home economics for fourteen years, some of the time on the staff of the Universities of Oregon, Washington, and North Dakota.